THIS WEEK'S National Petroleum NEWS

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Independent Oil Men's Association of New England: Worcester, Mass., Oct. 9.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 18, 19, 20.

Ohio Petroleum Marketers Association, Deshler-Wallick Hotel, Columbus, O., Sept. 18, 19.

Rocky Mountain Oil & Gas Association, Montana division, Paliser Hotel, Calgary, Alta., Sept. 19, 20, 21.

Virginia Oil Men's Association, Patrick Henry Hotel, Roanoke, Va., Sept. 26, 27.

National Safety Council, Petroleum Section, Congress Hotel, Chicago, Sept. 30, to Oct. 5.

National Association of Credit Men, Refinery Credit Managers to meet, Mayo Hotel, Tulsa, Oct. 3, 4.

Texas Petroleum Marketers Association, Plaza Hotel, San Antonio, Oct. 3, 4, 5.

International Petroleum Congress, Tulsa, Oct. 5.

American Petroleum Institute, Division of Development and Production Engineering, Tulsa, Oct. 7, 8. (To meet during Tulsa Expo.)

Missouri Oil Men's Association, President Hotel, Kansas City, Mo., Oct. 15.

Pennsylvania Independent Oil Men's Association, William Penn Hotel, Pittsburgh, Pa., Oct. 15, 16.

Big Four State Jobbers Convention, President Hotel, Kansas City, Oct. 15, 16, 17.

Independent Oil Men of America, Stevens Hotel, Chicago, Oct. 21, 22, 23.

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LLOYD E. LOCKHART, president of the Rio Grande Oil Co., this month will spud in a well in Oklahoma within 100 feet of the spot where he first entered business for himself. That was in 1902 when he married and moved to the vicinity of the Wealaka mission in the Creek Indian reservation, built a log cabin and began trading as a general merchant.

For a number of years Mr. Lockhart moved his stock of merchandise from place to place, following oil discoveries to such towns as Kiefer and Big Heart.

In 1915, he moved to El Paso, and with his brother, A. M., opened a jobbing plant under the name of the Rio Grande Oil Co. on Oct. 26. As an innovation the company abandoned horse-drawn tank wagons and substituted motors at the start and built the first drive-in service station in El Paso.

As the company expanded into adjacent states Mr. Lockhart called on his other brothers to join the organization until all of the six sons of C. H. Lockhart, Sr. were with the Rio Grande. The first refinery was built in 1918 at El Paso, a second at Phoenix in 1921, and a third at Vinvale, Calif., in 1923. The company became a producer as well as a refiner and marketer in 1920.

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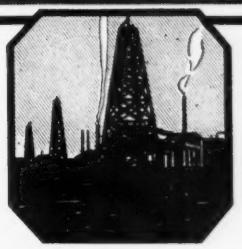

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California Prepares to Enforce Gas Law Through Injunction

By Jack N. Westsmith
N. P. N. STAFF WRITER

LOS ANGELES, Sept. 7

NO TANGIBLE results are apparent so far from the new gas conservation law in this state, which went into effect Sept. 1.

This law, which was drawn up largely with the cooperation of the principal oil companies in California, it is hoped will provide a means for ending the present overproduction of crude in California by holding in the production of gas in the new oil fields.

Oil companies in the various fields, while working out methods under which they can proceed under the law, are sitting tight at present without changing their operations to conform to its requirements.

James B. Bennett, attorney for the director of natural resources of the state, has stated a complaint to enjoin the unreasonable waste of gas under the new law in the Santa Fe Springs field is now complete and will be filed within the next few days.

Notice of a hearing to be held in the Ventura Ave. field has been prepared, it is said and is waiting for signature. It is to be scheduled for Sept. 21 before the state oil and gas supervisor.

The hearing at Ventura Avenue will involve the waste of gas through neglect to repressure depleted zones in the field as well as seeking to prevent the blowing of gas into the air.

In general conferences are still the order of the day. State officials gather and oil company executives foregather, but no definite action follows.

In conciliatory tones, state officials threaten drastic action. They are so conciliatory that Thomas A. O'Donnell, former president of the American Petroleum Institute, at a meeting on Friday felt impelled to urge these officials to take action, drastic action if necessary.

"Gas conservation in California will not be worth a tinker's dam," said Mr. O'Donnell, "unless the state officials draw a dead line and enforce the law, irrespective of any agreement between oil company executives."

Mr. O'Donnell calls himself an outsider looking in, but every one knows his heart is still in the oil business, although he may have officially retired from it.

No one doubts his genuine interest in the oil industry and the honesty of his desire to help it surmount its present difficulties. In his opinion the financial interests involved are so diversified and so opposed that the conservation law will never be enforced if enforcement depends on agreement among the operators.

But agreement among the operators is an important part of the state's plan for enforcement. State officials have repeatedly declared their intention of standing aside while oil executives thrashed out the question among themselves.

The major companies—Associated Oil Co., General Petroleum Corp., Richfield Oil Co., Shell Oil Co., Standard Oil Co. of California, The Texas Co., and Union Oil Co.—while in complete agreement as to the need for oil and gas conservation and in general agreement as to the desirability of the present proposals, have not yet actually signed on the dotted line.

These companies have been working together to put into concrete form the plan submitted to Reed Bush, state oil and gas supervisor, which received his approval.

The agreement quoted below forms part of that program. In its present form it embodies many concessions although even now it may not be in its final form. Further concessions may have to be made before the major companies are lined up solidly behind it. Then will come the difficult task of lining up the many independent operators, among whom are a number of companies that stand midway between the majors and the minors, with a leaning toward the majors, because they hope to be in the big group eventually.

Following is an outline of important sections of the agreement in its present amended form.

1. It is proposed to form an asso-

At the request of NATIONAL PETROLEUM NEWS the Federal Trade Commission at Washington prepared a list containing the names of all oil companies which have signified to the trade body their intention to adopt the code of marketing practices. This list, which was prepared Sept. 9 at Washington, was telegraphed in its entirety to Cleveland and appears in this issue starting on Page 33.

ciation of all the operators who subscribe to the agreement.

2. The amount of gas sold to the gas distributing companies shall be taken pro rata from all subscribers, but the companies having the contracts are to receive payment for such gas up to the minimum quantity of their contracts as though their own gas had been delivered.

The proceeds of the sale of all gas delivered in excess of the minimum of the contracts are to belong to the association and to be used to defray, in part, the cost of gas storage. It is estimated that this will amount to $2000 daily average.

3. A subscriber's pro rata of the total deliveries of gas from the field is determined by adding together

(a) The ratio that such subscriber's potential gas production in the field bears to the total potential gas production of all subscribers in such field; and

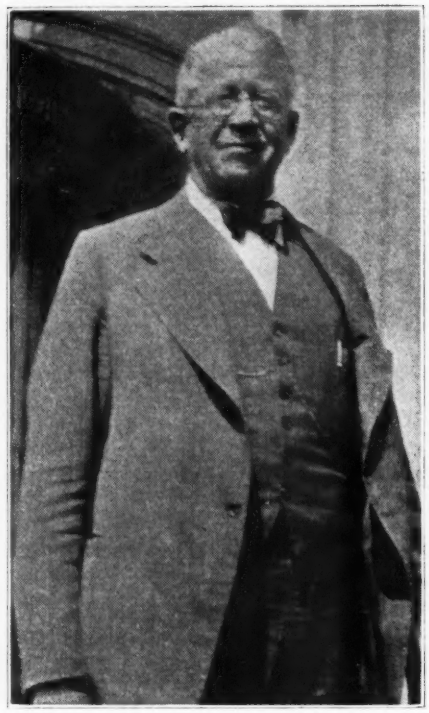
(b) The ratio that such subscriber's total oil potential production in the field bears to the total oil potential production of all subscribers in such field.

The sum of such ratios is then divided by two and the result is the subscriber's pro rata for that field. The potential gas and oil productions of a subscriber are those productions for the first ten days of the last 15 days prior to the date of the agreement.

The potential gas and oil production of a well completed subsequent to the date of the agreement is to be the average daily gas and oil production for the last four days of the first five days of its initial production. The potential gas and oil productions are to be re-established each month, or oftener if necessary, on the basis of decline curves, or such other basis as may be selected by the managing committee.

New methods of determining the pro rata may be authorized to remedy the defects, but only on the written consent or vote of three-fourths of the full managing committee.

4. The association is to be operated by a committee of 14, to be known as the "managing committee." One member of this committee to be named by each of the seven contributors, and the other seven are to be representative of non-contributors in each field covered by this agreement. Contributors are those oil companies which obligate themselves to assume expenses of the association remaining after its sale of gas. The companies who are at present contributors are the Associated Oil Co., General Petroleum Corp., Richfield Oil Co., Shell Oil Co., Standard Oil Co. of Calif., The Texas Co., and Union Oil Co. All vacancies occurring are to be filled by the managing committee by representatives of the same class as that to which the retiring committeeman belongs.



Thomas A. O'Donnell, Californian, former president of the American Petroleum Institute, who urges state officials to drastic action to enforce the new gas conservation law

5. The managing committee is to elect its chairman and other officials, but no officer of the association is to receive a salary except the secretary. The agreement provides for the employment of assistant statisticians, accountants, and clerks, as necessary, and their duties, terms and salaries are to be determined by the managing committee.

6. The expenses of the association are to be paid first from the funds belonging to the association, which are the proceeds from the sale of gas. These funds will not be sufficient for all purposes, and additional expense is to be paid by subscribers who have obligated themselves to do so, and such subscribers are designated as contributors.

Each of the seven companies above mentioned agrees to contribute equally an amount not in excess of $230,000 a year, making a maximum total of $1,610 000. Other contributors are to indicate the maximum of their annual liability, and expenses are to be prorated among all contributors on the basis of their contribution.

Telegraph Bulletin

LOS ANGELES, Sept. 10.—The proposed agreement covering operations under the new gas conservation law has been signed by the seven major oil companies and now awaits the signature of Reed Bush, oil and gas supervisor for the state. (The agreement is described in detail in the accompanying article.—Editor)

7. Any subscriber to this agreement has the right to withdraw from the association at the expiration of two years after the agreement becomes effective, or at the end of any year thereafter upon six months' written notice.

8. When the agreement becomes effective it is to be presented to the State Oil and Gas Supervisor for official approval, which approval is to be given on the same terms to which a subscriber is subject, that is, for two years after the effective date and termination of approval, thereafter, on six months' written notice.

9. When the agreement is terminated, if there are any funds or assets to be distributed, each contributor is to be repaid in proportion to his contribution, and whether a contributor or not, to be entitled to share in the distribution of any balance in the ratio in which he contributed gas.

Speaking in explanation of this agreement, Mr. Bush said that no charge is to be made against members of the association for the storage and repressuring of gas, whether in the field in which it is produced or in an outside field. A contributor of gas is indirectly reimbursed for his delivery of gas by reason of the fact that proceeds of the sale above the minimum of existing contracts are used by the association to defray, in part, the cost of storage.

In the case of gas stored in the field in which it is produced, the contributor of gas will, therefore, have in the future an opportunity to recover the stored gas if his property overlies the zone in which the gas is stored.

The fundamental principle of this plan is that every one shall have an equal pro rata opportunity to make physical disposition of the gas, so that no one will be obliged to blow gas into the air, or curtail his oil production in dis-proportion to his neighbors.

James B. Bennett, attorney for the director of natural resources of the state, is busy preparing for the enforcement of the act. He states that a complaint to enjoin the unreasonable waste of gas in the Santa Fe Springs field is now complete and will be filed within the next few days.

A hearing to consider conditions in the Ventura Avenue field will be held Sept. 21 before the state oil and gas supervisor. Notice of the hearing is now prepared and waiting for signature. All operators in any one field are made parties to the action, for the reason that all are interested in the conservation of gas and are presumed to desire to comply with the law. No assumption is made that they are guilty of breaking the law by wastage of gas.

The general opinion has been that action in enforcement of the law at Santa Fe Springs would be of chief interest and would be accepted as a

test of the constitutionality of the law. However, evidently the hearing at Ventura Avenue is of much greater importance to operators because it involves the waste of gas through neglect to repressure the depleted zones of that field, in addition to seeking to prevent the blowing of gas into the air.

Following the hearings at Santa Fe Springs and Ventura Avenue, hearings will be held at Long Beach, Huntington Beach, and Seal Beach.

In a statement regarding the measures that are being considered by the state to enforce the law, Mr. Bennett called attention to three cases in which drastic action by the state might be necessary to enforce a law that operates to the benefit of both producer and consumer.

In one case, he said, a man had paid taxes for years on waste, unproductive land. Oil was brought in and he made a very advantageous lease calling for the development of the land. A well was brought in with a high gas-oil ratio. Although, over a long period of time, the owner may be greatly benefited by shutting in the well, it is difficult to convince him of that fact. He may be dead before the money invested is repaid.

In another case, an oil company had taken a lease and paid $100,000 for it, borrowed $400.000 to drill the well, and secured production. If the company is ordered to stop production, it cannot pay its debts, and the financial reward is reaped by other parties.

In a third case, deposits of oil extend under the property of many owners. Some companies can afford to curtail, whereas others cannot. A ruling must be made that will be fair to all parties.

Although no official statement has been made, state authorities are said to contemplate drastic action, not only against unnecessary gas wastage, but also against unnecessary drilling.

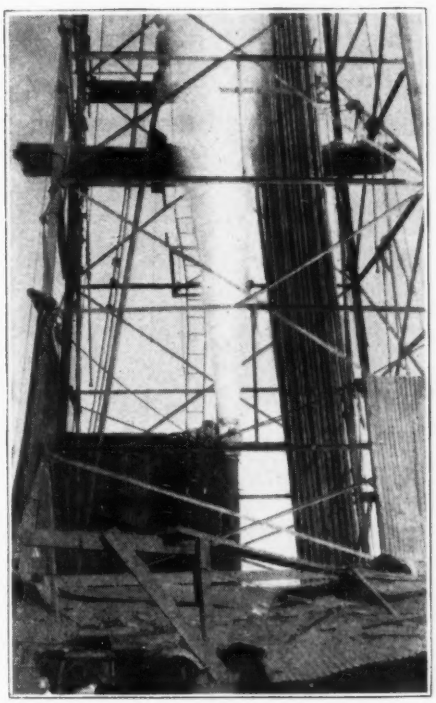
Oil men are generally of the opinion that the attempt to stop drilling will encounter serious difficulties that are not faced in the prevention of gas wastage. Although state officials will probably raise no objection to off-set drilling and to wildcatting, serious objection may be raised to any attempt to apply outside control to the development programs within the limits of a proven field.

For some time past many oil companies have been preparing the machinery and procedure necessary to eliminate gas wastage on their properties. They have hesitated, and many are still hesitating, about undertaking the heavy expense of installing compressors and other costly equipment required for repressuring, but their engineers have all been working intensively on the subject.

The Union Oil Co. has been transporting 34 gravity oil and its entrained gas from its wells at Santa Fe Springs to the Brea field, a distance of about 15 miles. At Brea the oil is being forced into the depleted structures, to be recovered at some later date. This procedure is made possible by the company's control of the Brea field, which it has been repressuring for some time. It also enables the company to avoid beaning some of its wells at Santa Fe Springs —a practice that is thought to have a tendency to reduce the ultimate recovery from the wells.

> The article on the protest of Kansas oil producers before the state tax commission against the consideration of a gross production tax in that state, which was scheduled on the cover as appearing in this issue, was withheld to give the space to other material. It will be carried in the Sept. 18th issue of NATIONAL PETROLEUM NEWS.

Engineers of the Richfield Oil Co. state that they are "sitting pretty" so far as gas wastage is concerned. The company's wells at Santa Fe Springs and Long Beach are blowing into the air a combined total of only 20 million cubic feet of gas daily. This satisfactory result is attributed to the experiments in pressure control that the company has conducted over a long period. As a result of these experiments, the company will not experience the difficulty found by many other companies that have allowed their wells to run wild.



Under partial control, Milham Exploration Oil Co.'s Elliott No. 1 Discovery well at Kettleman Hills, California, where there is a tremendous volume of gas with the oil

Meader No. 1 in the Long Beach field is one of the few wells that the Richfield Oil Co. has found difficulty in controlling. It is making about 3000 cubic feet of gas per barrel of oil, whereas the proper gas-oil ratio in this field is expected to vary from 1700 to 2000 cubic feet. Richfield engineers expect to have this outlaw well under control in the near future.

Associated Oil Co. is reported to be giving the new law 100 per cent support. In accordance with the expressed desire of state officials, three drilling wells on the Associated's leases in the Ventura Avenue field have been suspended until the demand for oil increases. The company is also adopting suitable methods of pressure control for its high-pressure wells at Ventura.

No announcements have been made as to the plans of Shell Oil Co. and Pacific Western Oil Co., two other major operators at Ventura Avenue, but both companies are known to be giving the movement their cordial support.

The Texas Co. is reported to have budgeted $150,000 for the third quarter of 1929 in order to meet the requirements of the new law. This company was one of the few majors that did not support the voluntary conservation agreement that ended several months ago, but it is now in line with the other companies.

Power companies are vitally interested in the new law, although probably the effect will be adverse. Operators that have been inclined to use electrical power units are now holding up orders for the installation of electrical equipment until it is definitely known how fully the law will be enforced.

An important feature of the new conservation law is its effect on the distribution and use of natural gas. During July, 1929, in California nearly 900 million cubic feet of gas, with heat units equivalent to 162,000 barrels of fuel oil, was blown into the air daily. It is estimated that a demand for this natural gas already exists in the state and that it could be fully utilized if proper distributing facilities were available.

Claude C. Brown, state gas administrator, gies the following summary of the existing and projected natural gas pipe lines to San Francisco in the north and to San Diego in the south.

First and most important is the line recently completed from Buttonwillow, through Kettleman Hills, to San Francisco. This line may be supplemented by another that will run through the San Juan Valley, through Contra Costa county, and tying in with the first line at Oakland. Other lines are projected to Victorville and to San Diego.

The Kettleman Hills to San Fran-

cisco line is 22 inches in diameter to Panoche Junction, and 20 inches from there to San Francisco.

Total pipe line and compressing capacity for the northern part of the state is 400,000,000 cubic feet daily. Of this amount 65 million cubic feet goes to San Francisco at the present time; and a similar amount will be added by the completion of a projected line.

However, the domestic and industrial utilization of natural gas is only a small part of the problem facing California operators at this time in connection with conservation. The major problem is concerned with the production of gas and particularly with the difficulty of satisfying the demands of the smaller operators. These small operators were largely responsible for the failure of voluntary curtailment and, unless their rights are fully protected, they may wreck the present program.

Davison Leaves Gulf Companies; Nutty and Leovy Promoted

PITTSBURGH, Sept. 9

GEORGE S. DAVISON who has been with the Gulf oil companies for 25 years, today resigned as vice-president and director of the Gulf Oil Corp., the holding company, and as president and director of numerous subsidiary operating companies.

G. R. Nutty and F. A. Leovy were elected vice-presidents of the Gulf Oil Corp., and C. B. Buerger a director of the parent corporation. Mr. Nutty was elected president of the Gulf Refining Co. and Bahama Gulf Oil Co.

Mr. Leovy was elected president of the following: Gulf Refining Co. of Louisiana; Gulf Pipe Line Co.; Gulf Pipe Line Co. of Oklahoma; Gulf Production Co.; Gypsy Oil Co.; Mexican Gulf Oil Co.; Eastern Gulf Oil Co.; Western Gulf Oil Co.; South American Gulf Oil Co.; Venezuela Gulf Oil Co.; Panama Gulf Oil Co., and the Indiana Oil & Gas Co.

Under the rearrangement refining and marketing operations will be managed by Mr. Nutty and production and pipe line operations by Mr. Leovy.

Mr. Leovy also succeeded Mr. Davison as director of the Indiana Oil & Gas Co. Other directorships in the Gulf companies were distributed as follows:

H. L. Stone in Gulf Refining Co.; E. C. Bothwell in production and pipe line companies; W. V. Hartman in Bahama Gulf Oil Co., and J. E. Nelson in Western Gulf Oil Co.

Mr. Davison will be 73 years old next week and he said he thought it was time to being to curtail his activities. On Sept. 30 when he retires from the Gulf, he will have completed 25 years with the Gulf and the oil industry although, having been reared in Pittsburgh and a resident here almost all his life, he was familiar with petroleum before engaging in the oil business.

Mr. Davison will resign as a member of the board of directors of the American Petroleum Institute at the Tulsa meeting of the A.P.I. board. He will sail Oct. 10 for Japan as a delegate to the World Engineering Congress from the American Society of Civil Engineers and as representative of several technical educational institutions in the United States.

Returning from Japan, Mr. Davison will devote considerable time to the Davison Coke & Iron Co., of which he is president. Other present interests include the presidency of the Pennsylvania Water Co., chairmanship of the Pittsburgh Aviation Industries, Corp., and activities in many civic or semi-civic organizations. He is a director of the Pennsylvania State Chamber of Commerce and the Pittsburgh Chamber of Commerce. He is also interested in city planning, a public auditorium for Pittsburgh, floor control and public safety.

Mr. Davison was a member of the National Petroleum War Service Committee during the war, and at one time was president of the American Society of Civil Engineers.

He was educated in the public schools of Pittsburgh and in the Rensselaer Polytechnic Institute at Troy, N. Y., receiving a degree in civil engineering. He became associated with the Mellon enterprises in Pittsburgh and because of his ability was placed in charge of their oil business a quarter of a century ago.

He holds the honorary degrees of doctor of engineering from his alma mater and doctor of science from the University of Pittsburgh.

George S. Davison

Seminole Safety Contest Closes

TULSA, Sept. 7.—The Greater Seminole Safety Contest which was conducted under the auspices of the Mid-Continent Oil & Gas Association was closed September 1, but the compilation of data and final awards probably will not be announced before the latter part of the month.

Reports for June and July indicated that 39 per cent of the contestants had perfect records. In the production division 36.8 per cent were perfect, in the gasoline division 55.5 per cent had perfect records while in the pipe line division 18.9 per cent were perfect. In the transportation division 28.1 per cent were perfect.

Texas Land Official Dies in East

HOUSTON, Sept. 8.—The death of J. T. Robison, commissioner of the general land office at Austin, Texas, was reported from New London, Conn., Sept. 7. Mr. Robison died on a vacation trip to the home of his son, Dr. J. T. Robison, Jr.

He contracted pneumonia after a nervous breakdown on the first vacation he had taken since entering the general land office 34 years ago. Mr. Robison was widely known in the petroleum industry because of his administration of University of Texas lands and public school lands in various parts of the state, especially in West Texas.

Lightning Ignites Oil

TULSA, Sept. 7.—Lightning struck a large storage tank of gas oil at The Texas Co. refinery in West Tulsa during a rain and electrical storm the evening of Sept. 3, and gave Tulsans not only the spectacle of an oil tank fire but also of the methods employed by company employes to combat such fires.

The tank was located only a short distance from highway 66 and the boiling oil threatened to overflow the highway. Hundreds of motorists stopped to see the fire. The damage to the tank and contents was estimated at $80,000.

Over 900 Oil Companies Have Signed To Adopt Marketing Code

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, Sept. 9

MOST major refining and marketing companies outside Texas and California have already put into effect in their businesses the code of practices for marketing refined petroleum products as approved by the Federal Trade Commission.

Over 900 oil companies have signed to adopt the code, the commission reported today at Washington.

With the going into effect of the code Aug. 31 numerous kinks in the practical application of the various rules have risen and state sub-committees of the American Petroleum Institute's national committee on interpretation of the code are striving to work out interpretations of the code applicable to the conduct of marketing in their respective states.

In Texas there has been hesitancy about signing the code because of fear of prosecution under the state's restraint of trade law. The code has been submitted to the attorney general of Texas, but so far he has not given a formal opinion about it, although he said he was not antagonistic to the purpose of the code. The Texas committee will meet Sept. 23 to recommend such action as it deems advisable.

Representatives of leading companies in California are reported to be working up their own set of interpretations to cover marketing conditions there, but action is being withheld until the return to San Francisco of K. R. Kingsbury, president, Standard Oil Co. of California, who is chairman of the A. P. I. committee for the Pacific Coast Region, answer to an inquiry indicates

Approximately 300 companies, large and small, have notified the A.P.I. in New York that they approve the resolution of the A.P.I. board of directors of July 30, in which the code authorized by the Federal Trade Commission was approved for adoption by our industry as of Aug. 31. Many of these companies also notified the institute that their companies had forwarded to the Federal Trade Commission their subscriptions to the code.

Only two of the major companies whose distribution of gasoline and other productions extends over a wide area were said to have failed to adopt the code. One company was said to be waiting to see what the other company intends to do and the latter company desired to make reservations as to Rules 3 and 10 of the code which apply to the painting of signs and buildings around retailers' service stations. This latter company was later reported to have signed as adopting the code.

However, the rule which to date has caused the most trouble and hesitancy against signing by many of the medium sized companies is Rule 17, which covers the posting of prices at service stations, bulk plants, terminals and refineries.

Perhaps the greatest hitch has been the posting of tank car prices. Even among signatory companies there is misunderstanding in regard to tank car price posting and further interpretations are expected to be made when the national committee, regional and state committees meet in Tulsa Oct. 3 and the A.P.I. board of directors may be asked at its meeting Oct. 4 to decide certain points of dispute, including that of painting.

Chairmen of many state sub-committees which have been holding meetings to provide for interpretation and propagation of the code among all dealers and distributors in their states, report application of the code beginning last week but most of them say it is yet too early to ascertain whether the hoped for clarification of markets has been accomplished.

SOME of these chairmen report that conditions are not yet what is hoped for. They report that some companies took advantage of the delay in the effective date of the code to sign contracts for the free installation of equipment and the writing of commercial contracts. This practice has caused some skepticism about the good faith of the offending companies.

Chairmen of many state sub-committees have informed NATIONAL PETROLEUM NEWS of the efforts that have been made in their states to put the code to work. W. R. Boyd, Jr., executive vice-president of the institute and a member of the national committee on interpretation, said concerning it:

"Some confusion has arisen about sending acceptances to the Federal Trade Commission. Some companies that are definitely pledged to support the code have withheld notifying Washington until they are assured that their principal competitors have or will do likewise. This is a rather natural precaution, but every major company would facilitate acceptance by others if it would promptly make publicly known its action or intention and issue instructions to its own organization to put the code into effect.

"EVERY company has two safeguards. The first is if all the major companies do not accept and conform to the provisions of the code, it may cancel promptly and without the slightest difficulty its acceptance merely by notifying the Federal Trade Commission. The second safeguard is contained in paragraph (d) of Section 5[1] of the A.P.I. board of directors' resolution of July 30 to which careful attention is invited.

"The code is not the Federal Trade Commission's code. It is not the American Petroleum Institute's code. It is the petroleum industry's code. Neither the commission nor the institute can maintain the code. The responsibility for its success or failure must inevitably and indubitably rest upon those units engaged in refining and marketing petroleum products. The only function which the institute and the other cooperating organizations of oil men and companies can perform is to provide the organization through which the men representing oil companies can cooperate.

"The consensus of business opinion in and out of the industry is that the code will do all and more than is claimed for it. Many of the things prohibited by the code are not per se unethical. The several rules were designed to outline what was unfair competition and in addition to establish by lawful agreement what was sound business practice which competitors could conform to.

"It is my personal judgment that, almost without exception, every company in the oil business will sooner or later accept and conform wholeheartedly to all the rules of the code because they find it good business practice for them to do so. Once the new rules become established

[1]See NATIONAL PETROLEUM NEWS, July 31, 1929, page 20.

practice there will be little difficulty in maintaining them.

"No revolutionary change in a system of doing business can be effected instantly or without difficulty. The code and all its provisions must be generally understood and to be most effective its application must be uniform throughout the country.

"THEORETICALLY the code went into effect Aug. 31, 1929. By Oct. 3 one month will have elapsed. On that date a joint meeting of the members of the National Committee On Interpretation, the members of the six regional code committees and the chairmen of all the state and other code sub-committees will be held in the Mayo hotel, Tulsa.

"The purpose of this joint meeting will be to receive reports of the progress made in putting the code into effect and to have a general discussion of all the rules and interpretations thereof in order that there may be general understanding among all the committeemen which should result in a more uniform application of the code throughout the country.

"The board of directors of the institute will meet at Tulsa Oct. 4. Various matters pertaining to the code will be discussed."

Since the promulgation of the code sales department executives and officers and directors of many of the largest companies have been busy preparing to put the code into effect in their companies.

Letters have been written explaining to all classes of employes affected by the code, just what it means. The employes have been given copies of the A.P.I. booklet containing the code with the interpretations of the national committee.

The Texas Co. has distributed 120,000 copies of the code to its employes, distributors, and dealers. The Standard Oil Co. of New Jersey has distributed 100,000 copies of the code.

The Texas Co., Sinclair Refining Co., and others have told their dealers, agents and others not controlled by the companies, that they had adopted the code of ethics and expected these dealers, agents or other distributors to abide by its provisions.

The Texas Co.'s letter to its employes covered seven printed letter size sheets. The letters were sent to district staff employes, district chief accountants, district credit men, representatives, special representatives, national sales representatives, salesmen and engineers of all classes, motor oil demonstrators, salaried and commission agents, bulk stations and service stations, peddlers, service station supervisors, and maintenance and construction foremen. Just what these men could do and could not do under the code was told in simple language.

Copies of letters sent out to the various classifications of sales department employes by the Sinclair Refining Co. made a stack several inches high.

Smaller marketing companies have been represented on state interpretation committees through the officers or directors of their state associations. Numerous state meetings have been held by the committees appointed by the A.P.I. and a few have permanently organized. A meeting of this sort was held Sept. 6 in Cleveland, at which William F. Burke, Kentucky Independent Oil Co., Cincinnati, was elected chairman, and W. A. Milne, secretary of the Ohio Petroleum Marketers Association, was elected secretary.

The committee, composed of those two men, Hubert B. Fuller, counsel of the Ohio association; W. A. McAfee, general counsel of the Standard Oil Co. of Ohio, L. B. Davis, Cities Service Oil Co., and Ralph Maylor, Pure Oil Co., decided to ask the national committee for more detailed interpretations of some of the rules of the code. The committee adopted two resolutions which serve as examples of what some of the state committees are doing. The first resolution was:

"That the practice of loaning or leasing gasoline and/or kerosene pumps and tanks, motor oil equipment, and greasing outfits not exceeding in cost $10 each, is now observed in Ohio; the practice of loaning greasing outfits exceeding in cost $10 each, is not observed in Ohio, therefore: Until the present practice is discontinued by general consent in Ohio, the above types of equipment may be loaned or leased free of charge or for a nominal consideration, subject to the restrictions of the code with respect to requiring advance payment of installation costs of underground equipment in the case of new or additional installations."

The second resolution was:

"That discounts to commercial accounts, whether for delivery at service stations or otherwise, are not in vogue in the state of Ohio. Therefore, if discounts are allowed to commercial accounts, either at service stations or in the case of deliveries by tank wagon, the special prices made to such commercial accounts, as well as other special prices, must be posted in the manner required by the code."

Tank wagon prices are being posted generally, it is the belief of sales executives of a group of the largest companies. So are service station prices. But some of the companies are puzzled about the tank car prices.

THERE are not many classifications in tank wagon prices and few classifications of discounts. The Texas Co. which has gasoline distribution in every state in the union has only three tank wagon price cards. One is for use in districts where a flat tank wagon price is used; the second is for use in Q.D.A. territory, and the third is for use in territory where there is the 2-and-2 arrangement or a tank wagon price with a service station price a certain sum above it and the price to dealers a certain sum less than the tank wagon price.

Posting of tank car prices is more difficult. Many sales executives have so far ignored such posting because opinions vary as to what should be posted. Some say the posted price must be the delivered price which would mean the posting of many prices in all cases in which gasoline is sold f.o.b. refinery. On the other hand it was found some refiners believed the f.o.b price was the one intended to be posted and that, as they were selling on a delivered basis, they would have to post an infinite number of prices.

ONE refinery in the east has been posting a price range since Sept. 1. Its plant is close to consuming centers and its prices are affected by prices of nearby competing plants. It meets the competition but in so doing its f.o.b. refinery prices vary with freight rates.

Mid-Continent refiners may meet sometime this week to decide just what they will do in regard to posting. A canvass of six of the larger plants in the Mid-Continent Sept. 7 showed none had begun to post tank car prices there and it might be some time before a satisfactory system could be worked out.

If contract prices are to be posted, an almost endless number of prices would be required, refiners point out. Sinclair Refining Co. believes it has complied satisfactorily with the spirit of the code by posting its spot prices and adding this to the posting:

"Marginal contract prices furnished at District office on request, are based on quantities, freight rates and marketing territory."

Northwestern Jobbers Urged to Sign Code

SUPERIOR, Wis., Sept. 9.—Questions concerning the loaning and leasing of equipment received most attention at the Northwestern Petroleum Association meeting on the code of ethics here today.

Paul E. Hadlick, secretary of the association and secretary of the trade practice conference at St. Louis last February, interpreted the code, and urged that it be subscribed to in order to get it under way because major companies may withdraw support if only a small percentage of marketers sign it.

About 20 of the 75 marketers that attended the meeting said they had signed it.

Signers of the Marketing Code

Following is the list of all oil companies which had signified to the Federal Trade Commission up to Sept. 10 their intention to put the oil industry's code of marketing practices into effect. This list was prepared by the trade commission at the request of NATIONAL PETROLEUM NEWS. To make it inclusive up to the latest possible moment before this issue was published this list was telegraphed in its entirety.

A

Alf Oil Co., Hamilton, Ohio.
Albion Marathon Oil Co., Albion, Mich.
Alpha Oil Co., Alpha, Ill.
Frederick D. Anderson, Los Angeles, Calif.
Acorn Petroleum Co., Coalinga, Calif.
Ackerman Oil Co., Liberal, Kans.
Ashley Rayfuse, Rumford, Me.
E. T. Anderson & Son, El Paso.
Anderson Oil Co., Coal City, Ill.
F. M. Aiken, Inc., Tulsa.
Anderson Oil Co., Andover, S. Dak.
Accurate Measure Oil Co., Columbus, O.
Ackerman Oil Co., Elkton, Mich.
American Oil Co., Winston-Salem, N. C.
Amery Oil Co., Amery, Wis.
Anchor Oil Co., Maricopa, Cal.
Archer Refining Corp., Wichita Falls, Texas.
Arlington Oil Co., Arlington, Minn.
Armould Oil Co., Quincy, Ill.
Arrow Petroleum Co., Forest Park, Ill.
Auxvasse Oil Co., Auxvasse, Mo.
Axelson Machine Co., Los Angeles.
Antioch Oil Co., Antioch, Ill.
Akin Gasoline Co., Tulsa.
Alco Oil Tool Co., Compton, Cal.
Antigo Union Oil Co., Antigo, Wis.
Apex Royalty Co., St. Louis.
Atlas Imperial Diesel Engine Co., Oakland, Cal.
R. E. Allen, Los Angeles, Cal.
Atlantic Keystone Petroleum Co., New York.
Avon Oil Co., Avon, Ill.
Arkansas Fuel Oil Co., Newark, Ohio.
Anna Oil Co., Anna, Ohio.
Atlantic Refining Co., New York.
Atlantic Refining Co., Philadelphia.
Alden Oil Co., Alden, Minn.
Alden Spears Sons Co., Cambridge, Mass.
Alden Oil Co., Manchester, N. H.
Apex Petroleum Corp., Los Angeles.
A. D. Anderson, Pellston, Mich.
Auto & Marine Garage, New Rochelle, N. Y.
American Oil Co., Hattiesburg, Miss.
Arlington Oil Co., Cranston, N. J.
Assumption Oil Co., Assumption, Ill.

B

Barnsdall Refining Co., Tulsa.
E. C. Baird, Arcadia, Nebr.
Bangor Motor Co., Bangor, Maine.
Blake Oil Co., Kirkland, Ill.
A. E. Booth, Bradford, Pa.
Banner Oil Co., Almont, N. D.
Bantel's Service, Murphysboro, Ill.
Barber Asphalt Co., Philadelphia.
Barnsdall Oil Co. of California, Los Angeles.
Bartles-Scott Oil Co., Willmar, Minn.
Mrs. Margaret D. Booth, Bradford, Pa.
Borden & Remington Co., Fall River, Mass.
Boston Petroleum Co., Boston.
Bovaird & Co., Bradford, Pa.
Bowman Oil Co., Gulliver, Mich.
H. E. Brandli, New York.
Braun Bros. Oil Co. Inc., Winnetka, Ill.
Butler Mfg. Co., Kansas City.
Buttram Petroleum Corp., Oklahoma City, Okla.
Batavia Oil Co., Batavia, Ohio.
Belding Oil Co., Belding, Mich.
Bell Oil Co., Carmen, Okla.
Bennett Pumps Corp., Muskegon, Mich.
Benson Oil Co., Benson, Minn.
Bishop Corp., San Francisco.
Bladen Oil Co., Bladenboro, N. C.
Brown Sheet Iron & Steel Co., St. Paul, Minn.
Buena Vista Oil Co., Alta, Iowa.
A. A. Brink, Capac, Mich.
Broadway Gas & Oil Co., Cadillac, Mich.
Broadway Service Station, Crossville, Tenn.
Brown's Service Station, Huron, S. D.
Bushnell Oil & Refining Co., Bushnell, Ill.
H. A. Barkhausen Oil Co., Green Bay, Wis.
Barnsdall Refineries Inc., Tulsa.
Bloomsberg's Service Station, Hudsonville, Mich.
Barnsdall Oil Co. of California, Los Angeles, Cal.
Bridgeport Machine Co., Wichita, Kan.
M. H. Bahnson Oil & Gas Co., Inwood, Iowa.
Joe Beef Auto Supply Co., Abinton, Mass.
L. O. Bean, Strongville, Ohio.
Wm. S. Barnickle & Co., St. Louis, Mo.
Bennett Oil Co., Ansonia, Ohio.
Brooks Engineering Corp., Los Angeles.
Bertram Naptha Co., Kansas City, Mo.
George F. Branch, Delano, Cal.
Brundeed & Brundeed, Los Angeles.
Butler County Oil Refining Co., Butler, Pa.
Bell Brothers, Robinson, Ill.
Becker County Oil Co., Detroit Lakes, Minn.
Borobills Oil Co., Borobills, N. D.
Busboom Oil Co., Gifford, Ill.
Beall Auto Co., Bussey, Iowa.
Burford Oil Co., Doniphan, Mo.
Big Lake Auto Co., Big Lake, Minn.
Bakersfield Sandstone Brick Co., Bakersfield, Cal.
H. J. Barneson, Los Angeles.
B. & M. Oil and Auto Storage Co., Ashland, Wis.
Bay Oil Co., Williams Bay, Wis.
Baker Oil Co., Melton, Pa.
Barnsdall Refining Co., Tulsa.
Bauer & Bauer, Crystal Lake, Ill.
Baron Huot Oil Co., Kankakee, Ill.
Barrows Coal Co., Inc., Brattleboro, Vt.
Bakersfield Garage & Auto Supply Co., Bakersfield, Cal.
Bank Oil Corp., Mt. Vernon, N. Y.
Bradford Oil Refining Co., Bradford, Pa.
Belleview Oil & Gas Co., East Liverpool, Ohio.
Buda Oil Station, Buda, Ill.
Beacon Oil Co., Everett, Mass.
E. J. Benson, Woodstock, Vt.
Geo. E. Black, Los Angeles.
Bailey & Grant, Fall River, Mass.
Edward B. Brook, Jamestown, R. I.

C

H. E. Camp Estate, Bradford, Pa.
Cando Oil Co., Cando, N. D.
Cape Cod Oil Co., Hyannis, Mass.
Carolina Oil & Supply Co., Hendersonville, N. C.
Carr Oil Co., Philadelphia.
Chanslor-Canfield Midway Oil Co., Torrance, Cal.
City Fuel Co., Lincoln, Neb.
W. H. Clark, Marietta, Ohio.
Fred G. Clark, Inc., Cleveland.
Clarksville Oil & Gas Co., Clarksville, Mich.
Central Gas & Oil Co., Flushing, Mich.
Central Oil Co., Inc., Norton, Va.
Chase Garage & Gas Co., Chase, Mich.
Chester Oil Co., Eddystone, Pa.
Cheatum Oil Co., Kingman, Kans.
Crystal Co-Operative Oil Co., Lake Crystal, Minn.
Curtiss Oil Co., Loyal Wis.
Cutler Bros., Inc., Delhi, La.
Cobden Service Station, Cobden, Ill.
Bert H. Collins, Bradford, Pa.
Colonial Oil Co., Grand Rapids, Mich.
Columbia Oil Co., Rio, Wis.
Commodore Oil & Gas Co., Steubenville, Ohio.
Community Motor Co., St. Clairsville, Ohio.
Community Oil Co., Charlotte, Mich.
Conneaut Can Co., Conneaut, Ohio.
Consolidated Oil Co., Houston, Texas.
Consumers Oil Co., Lidgerwood, N. D.
C. E. Cowan, Northampton, Mass.
Crescent Petroleum Co., Bakersfield, Calif.
Chicksan Oil Co., Fullerton, Cal.
Custer Oil Co., Flint, Mich.
Crandall-Pierce & Co., Chicago.
Cumbow-Lanning Oil Co., Sioux Falls, S. D.
Cottrell Oil Service, Carlock, Ill.

Signers of the Code of Marketing Practices

George A. Carden, New York.
Carson Oil Co., Cadiz, Ohio.
Carolina Oil & Supply Co., Hendersonville, N. C.
Rolla E. Clapp, Los Angeles.
Crescent Gasoline Co., St. Louis.
Clark Oil Co., Wichita Falls, Texas.
Cymrie Oil Co., San Francisco.
Chicago, Rock Island & Pac. Ry. Co., Chicago.
City Fuel & Oil Co., Manistique, Mich.
Carpenter Oil Co., Forest Lake, Minn.
Champaign Home Oil Co., Champaign, Ill.
Central Service Co., Lansing, Mich.
Calhoun County Oil Co., Battle Creek, Mich.
Coal Conversion Corp., New York.
Coast States Oil Co., Los Angeles.
The Call Oil Co., Fresno, Cal.
Caswell Auto & Mach. Co., Sandusky, Ohio.
Crystal Oil Works, Oil City, Pa.
Co-Operative Oil Co., Thomasville, Ga.
Crescent Oil Co., Baltimore.
M. E. Chivvis, Manton, Mich.
Cities Service Export Oil Co., New York.
Curry Bros. Oil Co., Boston.
Colby Oil Co., Colby, Wis.
Consolidated Royalty Oil Co., Casper, Wyo.
Co-Operative Oil Assn., Nicollet, Minn.
Carpenter & West, Hartford, Kans.
Chetek Equity Co-Op. Oil Co., Chetek, Wis.
Campeco Oil Co., Chicago.
Cass Farmers Oil Co., Virginia, Ill.
Capital Oil Co., Inc., East Providence, R. I.
Carlson Oil Co., Shelly, Minn.
Chief Oil Co., Cheyenne, Wyo.
Consumers Service, Inc., Malone, N. Y.
Continental Oil Co., Denver.
Corn Belt Oil Co., Marshalltown, Ia.
Crown Motor Oil Co., Inc., Providence.
J. E. Clayton-Kennedy, City Hall Station, N. Y.

D

Donovan Conlon Co., Atchison, Kans.
E. A. Doran Oil Co., Los Angeles.
Dove Oil Co., Milan, Minn.
Harry P. Dunn Co., Chicago.
Dana Oil Co., Cincinnati.
Durand Oil & Gas Co., Durand, Mich.
Doerfler Oil Co., Springfield, Ill.
Donaldo Service Station, Gerald, Mo.
Donnelly Oil Co., Pawnee City, Nebr.
W. H. Daugherty & Son Refining Co., Petrolia, Pa.
Davenport Oil & Supply Co., Davenport, Iowa.
Frank E. Davis, Hedrick, Iowa.
Denison Deep Rock Oil Co., Denison, Iowa.
De Soto Gasoline Co., Mounds, Okla.
Detroit Independent Oil Co., Detroit Lakes, Minn.
Dickins Oil Co., Dickins, Nebr.
Divide County Co-Op. Oil Co., Crosby, N. D.
Dixie Filling Stations, Momence, Ill.
Des Jardins Oil Co., Marquette, Mich.
Ducommun Corp., Los Angeles.
Dieck-Arveson Oil Co., Suring, Wis.
Dixie Oil Co., Inc., Shreveport.
Delta Oil Co., Gladstone, Mich.
Dibble Oil Co., Morris, Ill.
Wm. P. Deppi, New York.
S. M. Decker, New York.
W. J. Daily & Son, St. Francisville, Ill.
J. W. Dillion, Hudson, Mich.
Davis-Harris Oil Co., Kenne, N. H.
DeGraffe Oil Products, DeGraffe, Ohio.
Drew Bros., Cranston, R. I.
Deyo Oil Co., Inc., Binghamton, N. Y.
Dorman Oil Co., Wharton, N. J.
Arthur J. Debloise Oil Co., Attleboro, Mass.
J. H. Ducharms, Auburn, R. I.
Decatur Gas & Oil Co., Decatur, Ala.
Delavan Oil & Grease Co., Delavan, Minn.
Depot Garage Assn., Atlantic Highlands, N. J.
Devonian Oil Co., Tulsa.

E

Equity Elevator Co., Mapleton, Minn.
Eagle-Picher Lead Co., Henryetta, Okla.
East End Oil & Gas Co., Sharpsville, Pa.
Economy Oil Co., Leeds, Mo.
Eden Oil Co., Ainsworth, Iowa.
Eidam Tire & Supply Co., Lawrence, Mass.
Ellerback & Clarkin, Yetter, Iowa.
Elsner Oil Co., Frankfort, Ill.
Empire Gas and Fuel Co., Ltd., Wellsville, N. Y.
Eureka Gas & Service Station, Millington, Mich.
Empire Oil & Refining Co., Refining Division, Tulsa.
The Eagle Oil Co., Mebane, N. C.
Equipment Manufacturing Co., St. Louis.
El Dorado Home Oil Co., El Dorado, Ill.
Ergler Oil & Grease Co., Pittsburgh.
Edmonds Oil Co., Hastings, Mich.
W. J. Eaton, Columbus, Ohio.
Empire State Oil Co., Casper, Wyo.
E. R. Edson & Son Co., Cleveland.
Eastman Oil Co., Labanon, N. H.
East Puente Oil Co. of Cal., San Diego, Cal.
East Jersey Lumber Co., Metuchen, N. J.
Echels Tire Service & Auto Supplies, Jersey City, N. J.
El Dorado Refining Co., El Dorado, Kans.
Elma Oil Co., Elma, Ia.

F

Fairmount Oil, Inc., Woonsocket, R. I.
Federal Oil Co. of California, Los Angeles.
Farmers Co-Op. Oil Co., Wanamingo, Minn.
Farmers Co-Op. Grain & Supply Co., Spearville, Kans.
Farmers Oil Co., Wildrose, N. D.
Faultless Oil Co., Hawarden, Iowa.
E. A. Fennell Co., Los Angeles.
The Firelands Oil Co., Norwalk, Ohio.
Fenton Home Oil Co., Fenton, Iowa.
Fluor Construction Co., Los Angeles.
M. D. Fralick, Cheboygan, Mich.
W. B. Fulton, Gate City, Va.
Fulton & Alexander, Osborn, Ohio.
Franklin Creek Refining Corp., Franklin, Pa.
Full Measure Gas Co., Cincinnati, O.
Farabault Oil Co., Farabault, Minn.
Fuel Service Co., Inc., Malden, Mo.
Feisters Markets, Maricopa, Cal.
Frederickson Oil Co., Northport, Mich.
Federal Oil Co., Inc., Clayton, N. C.
Farmers Oil Co., Maplewood, Wis.
Fullerton Oil Co., Los Angeles.
Four States Oil Co., Abilene, Texas.
Peter Freschett, Grand Fork, N. Dak.
Fuel Oil Corp., Detroit.
Fiske Bros. Refining Co., New York.
Federal Petroleum Co., Enid, Okla.
Farlyn Oil Co., Houston.
F. & T. Oil Co., Arkansas City, Kans.
Farmers & Consumers Oil Co., Red Oak, Iowa.

G

R. F. Garland & Co., Tulsa.
Gasoline & Petroleum Co., Taylor, Texas.
Gentry Oil Co., Enid, Okla.
Genesee Oil Co., Flint, Mich.
Gibson Zahniser Oil Corp., Tulsa.
Golden Rule Refining Co., Wichita, Kans.
H. S. Goodell & Co., Hancock, Mich.
L. W. D. Gordon, Edina, Mo.
Great West Refining Co., Wichita Falls, Texas.
Greenville Service Co., Greenville, Ill.
Gwynn, Render, Wichita, Kans.
Grundy County Oil Co., Verona, Ill.
Gerlach Bros., Livingston, Texas.
Goodall-Crowley Oil Co., Beloit, Wis.
Grey Eagle Oil Co., Grey Eagle, Minn.
Gulbransons Garage, Houtzdale, Pa.
Gummere Oil Co., Stratton, Nebr.
Grigsby Oil Co., Blandinsville, Ill.
Goodyear-Wende Oil Corp., Buffalo.
Theo. Gregerson, Wheeler, Wis.
Guiberson Oil & Investment Co., Los Angeles.
Harry M. Gill & Co., Bakersfield, Cal.
H. W. Gross Oil Co., Rogers City, Mich.
H. W. Gilbert Petroleum Co., Beaumont, Texas.
Gault Filling Station, Lodi, Ohio.
Galva Service Co., Ida Grove, Iowa.
Gotham Oil & Gas Co., Tulsa.
Grayburg Oil Co., San Antonio.
Gen. Pet. Corp. of California, Los Angeles.
Grace Oil Co., Wildwood, N. J.
C. F. Gydeson & Sons, Houston, Texas.

H

Hansen Service Station, Iowa Falls, Iowa.
Hancock Oil Co., Hancock, Minn.
W. M. Hannan, Cambridge, Ohio.
Hansen & Jensen Oil Co., Escanaba, Mich.
Harris Bros., Cadillac, Mich.
Harrisburg Service Co., Harrisburg, Ill.

Signers of the Code of Marketing Practices

Hayes Equipment & Manufacturing Co., Wichita, Kans.
Healdton Petroleum Co., Ardmore, Okla.
Hidlay Oil Co., Kenosha, Wis.
Hogue & Wilson, Tobias, Nebr.
Holcomb Oil Co., Muskogee, Okla.
Home Oil & Gas Co., La Mesa, Texas.
Home Oil Co., Hamburg, Iowa.
Home Oil Co., Ardmore, Okla.
Hidlay Oil Co., Inc., Bloomsburg, Pa.
Herington Oil Co., Herington, Kans.
Hines Oil Co., Wichita Falls, Texas.
Home Oil Co. of Truman Inc., Truman, Minn.
Home Oil Co., Waterville, Minn.
Home Ranch Petroleum Co., Los Angeles.
H & H Oil Co., Trinity, Texas.
P. C. Hubbard, Bradford, Pa.
H. E. Huffman, Bryan, Ohio.
Hope Natural Gas Co., Pittsburgh.
Home Oil Co., Marion, Ill.
Hastings Cooperative Oil Co., Hastings, Mich.
Home Oil Co., Deslodge, Mo.
Honolulu Consolidated Oil Co., San Francisco.
Edwin B. Hopkins, New York.
Home Oil Co., Mangum, Okla.
Howard Oil Co., Mt. Hope, Kan.
Home Oil Co., Luray, Kan.
G. D. Herman & Sons, Inc., Oneida, N. Y.
Highlands Coal Co., Highlands, N. J.
Harry Hines, Wichita Falls, Texas.
Home Oil & Gas Co., Cedar Rapids, Ia.
Home Oil Co., Grayson, La.
Hidalgo County Oil Co., Weslaco, Tex.
Harmony Lorraine Oil Syndicate, Long Beach, Cal.
Wm. Hippert Oil Co., Fayette, Ohio.
Hannaford Service Station, Hannaford, N. D.
Harrisburg Pipe & Pipe Bending Co., Harrisburg, Pa.
Herculene Oil & Refining Corp., Syracuse, N. Y.
Hayfield Oil Co., Hayfield, Minn.
Home Auto Co., Charter Oak, Iowa.
Howard Brothers, Edgarton, Ohio.
Home Oil Co., Piedmont, Mo.
Hartley Co., Cambridge, Ohio.
Hirsch Cooperage & Steel Package Co., Houston.
Holt Oil Co., Ballinger, Texas.
Hummel Mfg. Co., St. Louis.
Heckerman Oil Co., Boonville, Mo.
Hills-McCanna Co., Chicago.

I

Ideal Lubricant & Coal Co., Appleton, Wis.
Imperial Oil Corp., Saginaw, Mich.
Independent Oil Co. of N. D., Devils Lake, N. D.
Iowa Petroleum Assn., Des Moines, Iowa.
Independent Oil Co., Nashville, Mich.
Independent Oil Co., Cookeville, Tenn.
Indian Refining Co., Lawrenceville, Ill.
Industrial Petroleum Corp., Chicago.
Inter Ocean Sales Corp., Riverside, Ill.
Interstate Oil Co., Kansas City, Kans.
Independent Oil Co., Harlingen, Texas.
Imperial Gypsum & Oil Corp., Los Angeles.
Imperial Belting Co., Chicago.
Independent Oil Co., Seymour, Mo.
International Petroleum Co., New York.
Independent Marketers, Inc., Denver, Colo.
Independent Oil Producers Agency, Los Angeles.
Independent Eastern Torpedo Co., Findlay, Ohio.
Imlay City Oil Co., Imlay City, Mich.
Independent Oil Co., Onamia, Minn.
Industrial Oil Co. of N. J., Ridgefield Park, N. J.
Indiana Oil & Gas Corp., New York.
Iaeger Gas & Oil Co., Iaeger, West Va.
Ingalls Farmer Oil Co., Ingalls, Kans.
L. C. Ilgen, Versailles, Ohio.
Illinois Petroleum Marketers Association, Springfield, Ill.

J

Jefferson Oil Co., Albert Lea, Minn.
Jess Oil Co., Fargo, N. D.
K. B. Johnson & Sons, Fuquay Springs, N. C.
Johns Manville Corp., New York.
The A. R. Jones Oil & Operating Co., Kansas City.
Dwight R. Judson Co., Hartford, Conn.
Jackson Center Oil Co., Jackson Center, Ohio.
Jorve Bros., Ypsilanti, N. D.
Johnson High Test Oil Co., Freeport, Ill.
Johnson Oil Co., Lake Lillian, Minn.
A. R. Jones Oil & Operating Co., Kansas City, Mo.
S. J. Johnson Co., Oakland, Cal.
Johnson High Test Oil Co., Kewanee, Ill.
Jenkins-Guerin Oil Co., St. Louis.
Jefferson County Oil Co., De Soto, Mo.
Jefferson Gasoline Co., Rayland, Ohio.
Jayhawks Oil Co., Salina, Kans.
Jackson Purchase Oil Co., Murray, Ky.
Johnson Oil Refining Co., Chicago.
Jackson Battery Co., Jackson, Ala.
Jones Filling Station, Red Bank, N. J.

K

The K-T Oil Corp., Wichita, Kans.
Kansas Oil Corp., Kansas City.
Kugler Oil Co., Culbertson, Texas.
Keefer Stations, Williamsport, Pa.
Kennedy Oils, Galesburg, Ill.
Keota Oil Co., Keota, Iowa.
Keystone Oil & Manufacturing Co., Chicago.
Kirk Oil Co., Chicago.
The Knupp Auto Co., Greenville, Ohio.
Knutson Auto Co., Blair, Wis.
The Kaufman Co., Los Angeles.
Kehern Bradley Co., Boston.
Keystone Driller Co., Beaver Falls, Pa.
Kanotex Refining Co., Arkansas City, Kans.
Kahler and Friend, Petoskey, Mich.
M. A. Kerr, Fellows, Cal.
Keystone State Oil Co., Providence.
Kopplin Oil Co., Littlefield, Minn.
Kent Oil Co., Salina, Kan.
Kroscheo Oil Co., San Antonio.
Kingston Oil Co., Inc., Kingston, N. Y.
K-T Oil Co., Wichita, Kans.
Geo. L. King, Santa Ana, Cal.
Kingston Oil & Gas Co., Kingston, Mich.

L

Lafayette Oil Co., Corder, Mo.
Lakeland Oil Co., Minneapolis.
Lancaster Oil Co., Lancaster, Kans.
LaSalle Petroleum Co., Tulsa.
Latham Oil Co., Latham, Ill.
Latimer Oil Co., Latimer, Iowa.
Long Oil Co., Manhattan, Kans.
Leaksville Oil & Gas Co., Leaksville, N. C.
Lincoln Petroleum Producers Co., Flint, Mich.
Lincoln Way Service, Kearney, Nebr.
Lindsay McMillan Co., Milwaukee.
Lisbon Oil & Gas Co., Lisbon, Ohio.
Logan Farm Supply Co., Lincoln, Ill.
Lomita Gasoline Co., Long Beach, Cal.
Lord Lumber Co., La Grange, Ill.
Lindsay Oil Co., Grand Ridge, Ill.
Lomas Oil Co., Bismark ,N. D.
La Porte Ind Oil Co., LaPorte, Ind.
Lloyd Motors Sales, Rockford, Ill.
Lake Port Pet. Co., Los Angeles.
Larson Oil Co., Taylor, Wis.
Lacey Mfg. Co., Los Angeles.
Larkin Packer Co., St. Louis.
Lake Odessa Oil Co., Lake Odessa, Mich.
Lain Oil Co., Bloomington, Ill.
Lion Oil Refining Co., Eldorado, Ark.
Wm. Lusk, Branham, Texas.
Lubrite Refining Co., St. Louis.
Leemorr Oil Co., Morris, Ill.
Libby Oil Co., Parkville, Conn.
Lone Star Gas Co., Dallas.
Lexington Garage, Brooklyn.
Arthur H. Landers Corp., Westfield, Mass.
Liberty Auto Supply Co., Lebanon, Pa.

Mc

McCullough Filling Station, Marion, Kans.
McCulloch-Meisenbach Oil Co., Hastings, Nebr.
Nat. L. McGuire, Inc., St. Louis.
McLean, Jones Oil & Supply Co., Boston.
D. K. McLennan, McKittrick, Calif.
J. I. McFarland, Lodi, Wis.
T. W. McCune, Louisiana, Mo.
McCown Oil Co., Inc., Mobile, Ala.

M

Midway Oil Co., Inc., Rock Island, Ill.
Malden Co-Op. Oil Co., Malden, Ill.
Marek Oil Co., Pekin, Ill.
Marietta Co-Op. Oil Co., Marietta, Minn.
Middletown Farmers Co-Op. Co., Middletown, Wis.
Meiller Co., Iron Mountain, Mich.
Midland Refining Co., Midland, Texas.
Midwest Waverly Oil Co., Wichita, Kans.
Miller Oil Co., Wilkes-Barre, Pa.

Signers of the Code of Marketing Practices

Mille Lacs Oil Co., Milaca, Minn.
Miar Milling Co., College Corners, Ohio.
Leo. A. Mountain, Portsmouth, Iowa.
Monsey Oil Co., Tyler, Texas.
Mountaur Auto Service Co., Mountoursville, Pa.
Marion Oil Co., Marion, Ohio.
Markle Oil Co., Winona, Minn.
L. J. Masapust Gas-Oil Co., Wakeeney, Kans.
Mathews Oil Co., Mullen, Nebr.
R. E. Megee & Co., San Antonio, Tex.
Merchants Oil Co., Cincinnati .
Mt. Union Fuel & Supply, Mt. Union, Pa.
W. E. Mountain, Pilot Point, Texas.
Moore-Backes Oil Co., Inc., Belle Plaine, Minn.
Moose Lake Oil Co., Moose Lake, Minn.
Morgal Oil Co., Morgan, Minn.
Moreland Oil Corp., Adrian, Mich.
Motor Inn Oil Co., Columbus, Nebr.
Mt. Ayr Oil Co., Mt. Ayr, Iowa.
McIntosh Motor Co., McIntosh, S. D.
Munising Oil Co., Munising, Mich.
Muskegon Co-Operative Oil Co., Muskegon, Mich.
Minster Oil Co., Minster, Ohio.
Mills Bennett Production Co., Houston.
Murray Brooks Hardware Co., Ltd., Lake Charles, La.
Miller Brothers, Milledgeville, Ill.
Mouse River Valley Oil Co., Minot, N. D.
Mid Continent Oil Co., Sheridan, Wyo.
McIntosh & Seymour Corp., Auburn, N. Y.
H. J. McMullen, Ft. Worth, Texas.
W. J. Miller, Wharton, Tex.
Murray Tool & Supply Co., Cleveland, Okla.
Macon Oil Co., Decatur, Ill.
Midwest Piping & Supply Co., Inc., St. Louis.
A. P. May, Inc., Coalinga, Cal.
Mayer Oil Co., Pittsburgh, Kans.
McCullough Oil Co., Glasco, Kans.
S. N. Mitchell, Quannah, Texas.
Maringo Oil & Gas Co., Maringo, Ill.
Madison Oil Co., Chicago.
Maringo Shale Rock Oil Co., Coal City, Ill.
Magie Bros., Chicago.
Marlette Oil & Gas Co., Marlette, Mich.
Midway-Northern Oil Co., Los Angeles.
Mapleton Oil Co., Mapleton, Iowa.
McClure Oil Co., Dayton, Ohio.
McGowan Tire Co., Sioux City, Iowa.
Milford Oil Co., Milford, Ill.
Manheim Mfg. & Belting Co., Manheim, Pa.
Mitchel Realty Co., Los Angeles.
Mutual Refining Co., Warren, Pa.
Madison Oil & Gas Co., Fort Worth.
Manchester Coal & Ice Co., Manchester, N. H.
Masury-Young Co., Boston.
Medford Service Station, Medford, N. Y.
Mitchell's J. D. Gas Co., Cranston, Ia.
Molo Oil Co., Dubuque, Ia.
Moon Oil Co., Graham, N. C.
Mutual Oil Co., Collinsville, Ala.
Midwest Refining Co., Denver.
Midwest Oil & Tire Co., Garden City, Kan.
Mandt Oil Co., Goodridge, Minn.
Monroe Union Oil Co., Rochester, N. Y.
Mower County Oil Co., Austin, Minn.
The J. B. Murphy Co., Watertown, Wis.
Murphy Oil Co., Higbee, Mo.
Murray County Co-Op. Oil Co., Slayton, Minn.
Muscle Shoals Oil Co., Florence, Ala.
MacMillan & Cameron, Inc., Wilmington, N. C.
McMillen Oil Co., Aeden, Iowa.
McKean County Refining Co., Smethport, Pa.

N

National Tube Co., McKeesport, Pa.
Nagel Service Station, Portsmouth, Ohio.
Nebraska-Iowa Oil Co., Blair, Nebr.
Nerstrand Oil Co., Nerstrand, Minn.
New Era Oil Co., Belleville, Ill.
Norwall-Robey Co., Caldwell, Ohio.
Nourse Oil Co., Kansas City, Mo.
Newburg Gasoline & Oil Co., Cleveland.
Northfield Oil Co., Northfield, Minn.
E. H. Neumeyer, Stockertown, Pa.
Neilan Schumacher & Co., Los Angeles.
Northway Oil Co., Owosso, Mich.
North American Oil Consolidated, San Francisco.
F. A. Nutty, Washington, Ill.
North Fork Oil Co., Newark, Ohio.
A. E. Newton, Brooklyn.
Navano Oil Co., Houston.
Newport Oil Corp., Newport, R. I.
Northwestern Pet. Corp., Appleton, Wis.
National Oil Co., Richmond, Va.

O

Ostby Service Station, Sheyenne, N. D.
Orange State Oil Co., Miami, Fla.
Old Town Fuel Co., Old Town, Me.
Ofe Oil Co., Plattsmouth, Nebr.
The Oil & Battery Service Co., Chillicothe, Ohio.
Oyl-Ryt Oil Co., Findlay, Ill.
Owosso Gas & Oil Co., Owosso, Mich.
Osborn Eng. & Elec. Co., Bakersville, Cal.
J. Ward Owen, Lebanon, Mo.
O'Connor Bros., Bellows Falls, Vt.
Osseppee Oil Co., Inc., Osseppee, N. H.
Orange State Oil Co., Miami, Fla.
Oil Co. Inc., Graceville, Minn.

P

Pilger Oil Co., Pilger, Nebr.
The Palmer Corp. of America, Shreveport.
Claude A. Purcell, Parker, S. D.
The Powerine Co., Denver.
Palm Oil Co., Amanda, Ohio.
Putnam Oil Co., Tulsa.
Peoples Fuel Oil and Supply Co., Barre, Vt.
The Point Filling and Battery Station, Coshocton, Ohio.
Pacific Western Oil Co., Los Angeles.
Plymouth Petroleum Co., Tulsa.
Pioneer Augo Co., Waukon, Ia.
Peerless Oil Co., Luverne, Iowa.
Pioneer Refiners Co., Wichita Falls, Texas.
Pioneer Rubber Co., Willard, Ohio.
Pennsylvania Oil Co., Chicago.
Pearl Filling Station, Elkhorn, Nebr.
C. P. Prouty Oil Co., Alexandria, Neb.
The Porter Oil Co., Leavenworth, Kan.
Pickard-Wilson Motor Co., Kennett, Mo.
Pacific Pipe & Supply Co., Los Angeles.
Perkins Oil Well Cementing Co., Los Angeles.
Peerless Oil & Gas Co., Indiana, Pa.
Parkersburg Rig & Reel Co., Parkersburg, W. Va.
Pressed Steel Tank Co., Milwaukee, Wis.
C. T. Potter, Lacygne, Kans.
Peterson Service Station, Virginia, Ill.
Puritan Oil Co., Ltd., Regina, Sask., Canada.
George C. Peterson Co., Chicago.
Perry Service Station, Freeport, Tex.
Personal Service Oil Co., Craig, Iowa.
Peerless Oil Co., Elyria, Ohio.
Parent Oil Co. of Erie, Erie, Pa.
Prairie Oil Co., Blooming Prairie, Minn.
Peoples Oil & Gas Co., Pigeon, Mich.
Pulver Oil Co., Lansing, Mich.
The Petroleum Supply Co., Inc., Taft, Calif.
Petroleum Research Corp., New York.
Pilkington Oil Co., Grape Creek, Ill.
M. R. Patterson, Jamestown, N. Y.
Picard Gasoline Co., Westerly, R. I.
The Patapsco Oil & Grease Co., Baltimore.
Pettibone Farmers Union Elevator Co., Pettibone, N. D.
Preston Oil Co., Columbus, Ohio.
Peoples Gasoline & Oil Co., Hoosick Falls, N. Y.
Park Gasoline Service Co., Warren, Ohio.
Pollard Oil Co., Clarks, Nebr.
Petroleum Rectifying Co., Los Angeles.
Plymouth Oil Co., Plymouth, O.
The Pennzoil Co., Oil City, Pa.
Producers & Refiners Corp., Independence, Kans.
Pennsylvania Grade Crude Oil Association, Oil City, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Perkins Oil Well Cementing Co., Los Angeles.
L. O. B. Producing & Drilling Co., Los Angeles.
Pacific States Petroleum Co., Coalinga, Cal.
Peoples Natural Gas Co., Pittsburgh.
Porter Co-Op. Oil Co., Porter, Minn.
Pond Oil Co., Mankato, Minn.
Patch Brothers, Glen Ellyn, Ill.
Pure Oil Co., Chicago.
Pocahontas Oil Corp., Cleveland.

Signers of the Code of Marketing Practices

Peoples Oil Co., Cape Girdareau, Mo.
Producers Gas Co., Olean, N. Y.
Phoenix Oil Co., Cleveland.
Pennsylvania Petroleum Corp., Detroit.
Painted Hills Oil Association, Long Beach, Calif.
Penn-Bright Oil Co., Chicago.

Q

Quality Oil Co., Beardstown, Ill.
Quality Oil Co., Leeds, N. D.
Queen City Petroleum Products Co., Cincinnati.
Quamba Oil Co., Quamba, Minn.

R

The H. G. Root Co., Springfield, Ohio.
Rusk Oil Co., Philadelphia.
O. A. Rucker Oil Co., Belle Plaine, Iowa.
"Railroad" Jones Oil Co., Winston-Salem, N. C.
J. H. Richardson, Inc., Bridgeport, Conn.
Reliance Coal & Oil Co., Asheville, N. C.
Reliable Gas & Oils, Inc., Newark, N. J.
Randolph Oil Co., Randolph, Wis.
Rochester Ice & Fuel Co., Rochester, Minn.
Rose Oil Co., Williamsburg, Ohio.
Rock Port Oil Co., Rock Port, Mo.
Randolph Motor Service, Inc., Randolph, Vt.
Rose Kelly Auto Supply Co., Milan, Ohio.
Roth Oil Co., Mantorville, Minn.
Remsen Tank Line Co., Remsen, Iowa.
The Roehl Oil Co., Elyria, Ohio.
Richardson Lub. Co., Quincy, Ill.
Randolph Coal & Ice Co., Randolph, Vt.
The Royal Oil Co., Thorp, Wis.
Roanoke Oil Co., Roanoke, Ill.
Red Indian Oil Co., Detroit.
F. D. Ross & Co., Manning, Iowa.
Redondo Floral Co., Los Angeles.
G. H. Rabon, (Bankl) Richfield Oil Co., Los Angeles.
Rohde-Dewstro-Hunteley Oil Co., West Allis, Wis.
Republic Supply Co. of California, Los Angeles.
Red Star Oil Co., Inc., Fond Du Lac, Wis.
Richfield Oil Co. of California, Los Angeles.
Rolla Oil Co., Rolla, N. D.
Red Star Oil Co., Medicine Lodge, Kan.
Rhode-Deuster-Hinkley Oil Co., West Allis, Wis.
Richardson Oil & Merc. Co., Kirksville, Mo.
Reno Oil Co., Sistersville, W. Va.
Red "C" Oil Co., Baltimore, Md.
Ross Heater & Mfg. Co., Buffalo.
Refiners Dist. Oil Co., Inc., Providence.
Ridge Oil Co., Madison, O.
Red Eagle Oil Co., Macon, Mo.

S

Sand Hill Oil Co., Bescoe, N. C.
Sands Petroleum Co., Kirksville, Mo.
Sammy Lane Oil Co., Branson, Mo.
V. J. Sauer Petroleum Products, Pine River, Minn.
Skokie Oil & Coal Co., Niles Center, Ill.
Stapleton Oil Co., Creston, Iowa.
Smith Oil & Refining Co., Rockford, Ill.
Walter Snook, Maricopa, Calif.
Somerset Gasoline Co. Inc., Somerset, Pa.
Sawyer & Sons, DeKalb, Ill.
Sawyer Oil Co., Charlotte, Mich.
A. Schaefer Oil Co., Omaha, Nebr.
Schneiter-Luster Oil Co., Taylorville, Ill.
H. W. Schulty, Westbranch, Mich.
Selby Oil & Gas Co., Tulsa, Okla.
Service Oil & Gasoline Co., Muskogee, Okla.
Shingleton Oil Co., Shingleton, Mich.
South Dome Oil Co., Coalinga, Calif.
Speckmann Oil Co., Bay City, Mich.
Sprinkle Oil Co., Inc., Reidsville, N. C.
Stalcup Oil Co., Inc., Kansas City, Mo.
Staples Oil Co., Staples, Minn.
Harry Stensen, Port Clinton, Ohio.
Stranahan & Cheuvront, Oblong, Ill.
Shell Oil Co., New York.
Shirley Oil & Supply Co., Shirley, Ill.
Sioux Oil Co., Sheldon, Iowa.
Smart's Oil Co., Waltham, Mass.
Stockton Oil Co., Louise, Texas.
C. B. Shanks Oil Co., Ashley, Ill.
Sunlight Oil Co., Wren, Ohio.
Sunrise Oil Co., Minneapolis, Minn.
Supreme Oil & Service Co., Olyphant, Pa.
Scott Oil Co., Manchester, N. H.
Seven-Eleven Oil Co., Greenwood, Miss.
Frances Shafto, Farmingdale, N. J.
Shale Rock Oil Co., Coal City, Ill.
Sherrill Oil Co., Pensacola, Fla.
Standard Oil Co. (Indiana) Chicago.
Shay McMullin Co., Inc., Rochester, N. Y.
Smiths Garage, Hacklestown, N. J.
Sun Oil Co., Philadelphia.
Standard Oil Co. of Ohio, Cleveland.
Sweeney Gasoline & Oil Co., Peoria, Ill.
Scott Thibault Oil Co., (Address not Given).
Superior Oil Works, Warren, Pa.
Smith Booth Usher Co., Los Angeles.
Simpson Oil Co., Charleston, Mo.
Skelly Oil Co., El Dorado, Kans.
Spindler Co., Manitowoc, Wis.
A. G. Sorlie Co., Grand Forks, S. D.
John H. Spengler Oil Co., Marion, Wis.
Southern Counties Gas Co., Los Angeles.
Speik Oil Co., Los Angeles.
F. R. Smith Oil Co., Fremont, Ohio.
Southwest Supply Co., Bartlesville, Okla.
Southwestern Resources, San Antonio
Simrall Refining Corp., Cincinnati.
Shell Oil Corp., St. Louis.
P. H. Shattuck, Dallas, Texas.
St. Charles Oil Co., St. Charles, Ill.
Standard Oil Co. of N. J., New York.
Standard Oil Co. of Penn., New York.
John Stevens Oil Co., Genoa, Ohio.
Henry Schaefer Oil Co., Elreno, Okla.
Stephen Shimonek, Jr., Wilmette, Ill.
Service Oil Co., Lakin, Kan.
Sunburst Oil & Refining Co., Great Falls, Mont.
J. D. Street & Co., Inc., St. Louis.
H. B. Sawyer Oil Co., Boston.
Sylvania Petroleum Co., Sylvania, O.
Sinclair Refining Co., New York.
Standard Oil Co. of New York, New York.
Sweet & Burt Co., Inc., Monroeville, Vt.
St. George Oil Co., St. George, Kan.
Standard Oil Co., Louisville, Ky.
The Seaboard Oil Co., Jacksonville, Fla.
Statesville Oil Co., Statesville, N. C.
Stanford Oil Co., Glenbrook, Conn.

T

Toledo Oil Co., Toledo, Ill.
Trenton Home Oil Co. Inc., Trenton, Mo.
Taubman Supply Co., Tulsa, Okla.
Texas Mex Oil Refining Co., Laredo, Texas.
Texas-Pacific Coal & Oil Co., Fort Worth.
Theisen-Clemens Co., St. Joseph, Mich.
O. B. Thomas Oil Co., Sayre, Okla.
Ties-Wooling Oil Co., Brodhead, Wis.
Townsend Oil Co., Leroy, N. Y.
Trent Oil Co., Trent, Texas.
Tulsa Rig Reel & Mfg. Co., Tulsa, Okla.
W. C. Taylor Oil Co., Verona, N. D.
Triangle Coal & Oil Co., Alma, Mich.
Trojan Oil Co., Los Angeles.
Geo. E. Thompson, Taylorville, Ill.
Taylor Oil Co., Whitefield, N. H.
Tide Water Oil Co., New York.
Timber City Oil Co., Mayoketa, Ia.
Triangle Service Co., Inc., Iron Mountain, Mich.
Taubman Supply Corp'n., Tulsa, Okla.
Trilling Bros. Oil Co., Sheboygan, Wis.
W. A. Trimble Oil Co., Eaton Rapids, Mich.
Triangle Drilling Co. Inc., Shreveport.
Teapot Dome Oil Co., Grafton, N. Dak.
The Texas Co. (Calif.), Los Angeles.
The Texas Co. (Del.), New York.
Turney Brothers, Superior, Wis.
Tate Brothers Oil Co., Trenton, N. J.
Tri State Refining Co., Kenova, Va.
Tyler Oil Co., Cincinnati.
Triangle Tire & Oil Co., Lebanon, Pa.
Tidewater Oil Sales Corp., Lancaster, Pa.
Triton Oil Co., Newport, R. I.

U

Union Hardware & Metal Co., Los Angeles.
Union Tank Car Co., Chicago.
Uhlig Oil Co., Sutherland, Nebr.
United Gas & Oil Co., Charlotte, Mich.
Union Appraisal Co., Los Angeles.

Signers of the Code of Marketing Practices

Union Metal Manufacturing Co., Canton, O.
Union Oil Co., Eveleth, Minn.
United Oil Co., Valdosta, Ga.
Union Oil Co. of Nevada, Los Angeles.
Union Oil Co. of Arizona, Los Angeles.
Union Oil Co. of California, Los Angeles.
Utah Oil Refining Co., Salt Lake City.

V

Valley Oil Co., Waynesboro, Va.
Vacuum Oil Co., New York.
Valley Oil Co., Argyle, Minn.
Valley Oil Co., Forest City, Iowa.
Valvoline Oil Co., Chicago.
Vaughan Oil Co., Muskogee, Okla.
Vaughns Service Stations, Cincinnati, Ohio.
Valley Oil Co., New Philadelphia, Pa.
Voress Oil Co., Windom, Kans.
Victor Pet. Products Corp., Worcester, Mass.
Vulcan Gasoline & Oil Co., Tamaqua, Pa.
Vaughan Service Station, Zeigler, Ill.
Valders Collins Oil Co., Valders, Wis.
Venezuelan-Mexican Oil Corp., New York.
Wm. C. Vandenberg, Holland, Mich.
Vickers Pet. Co. of Del., Wichita, Kans.
Vigilant Mills, Frankford, Pa.
F. C. Van Deinse, Los Angeles.

W

Weldon Oil Co., Weldon, Ill.
J. C. Wabeke, Fremont, Mich.
Winters Oil Co., Greensburg, Kan.
Wenonah Oil Corp., Bay City, Mich.
Witasek Bros., Lankin, N. D.
Wesley Rogers, Canton, Okla.
Warren Tire & Oil Co., Portland, Me.
Warren Petroleum Co., Tulsa.
Whiting Oil Co., Clifton Forge, Va.
S. J. Whitney, Los Angeles.
L. G. Whittemore, Atlantic, Mass.
The Wakeman Oil Co., Wakeman, Ohio.
R. L. Wyatt, Tustin, Mich.
V. R. G. Wilbur, Long Beach, Calif.
B. H. Wilson & Co., Chicago, Ill.
Waseca Oil Co., Waseca, Minn.
W. B. Watson Co., Albion, Nebr.
Weeks Oil Co., Inc., Auburn, N. Y.
Wesco Petroleum Co., Los Angeles, Calif.
The West Side Motor Co., Hamilton, Iowa.
Western Nebraska Oil Co., Inc., Sidney, Nebr.
C. A. White Constr. Co., Willoughby, Ohio.
White Bear Oil Co., White Bear Lake, Minn.
White Service Station Co., Ft. Dodge, Iowa.
Winger Oil Co., Winger, Minn.
Wishard Oil Co., Bloomfield, Iowa.
J. A. Woods, Wichita, Kans.
World Petroleum Corp., Los Angeles.
Warner-Quinlan Oil Co., Titusville, Pa.
Worth County Co-Op. Oil Co., Northwood, Iowa.
W. A. Wood Co., Boston.
Wisconsin Lubricating & Oil Corp., Menasha, Wis.
Waupun Oil Co., Waupun, Wis.
Dr. E. C. R. Weisgerber, Los Angeles.
Mansel Williams, Pleasant City, Ohio.
Wofford Oil Co., Atlanta, Ga.
Warrensburg Oil Co., Warrensburg, Mo.
Wright-Sullivan Oil Co., Champaign, Ill.
Washington Co. Oil Co., Potosi, Mo.
O. W. Wells, New York.
Wetzig Oil Co., Junction City, Kan.
Willetset Paul Corp., Washington, Pa.
Worcester Auto Sales, Rood House, Ill.
M. H. Whittier Co., Los Angeles.
Willoughby Gasoline and Oil Co., Willoughby, Ohio.
Wofford Oil Co., Birmingham, Ala.
Wood Brock Farms, Metuchen, N. J.

Y

York S. Mullin Oil Co., Whittier, Calif.
Yost Auto Co., Sutton, Nebr.
York Oil & Chemical Co., York, Pa.
Yawkey-Dissell Lbr. Co., White Lake, Wis.
L. York & Lockhart, Los Angeles.

Z

Zahller Bros. Oil Co., Thayer, Iowa.
John Zimmerman & Sons Inc., Philadelphia.
Zeigler-Deardorff Co., Inc., York, Pa.

A. P. I. Engineers to Meet at Midland

GALVESTON, Sept. 7.—Before adjourning their mid-year meeting at Galveston, Sept. 6, the Texas-Louisiana-Arkansas engineering group of the American Petroleum Institute voted to hold their annual district convention next spring at Midland, West Texas. An invitation of the Midland Chamber of Commerce was officially presented to the engineers by Charles W. Alcorn, district production executive of the Shell Petroleum Corp., in West Texas.

Phillips Buys Stations In Lincoln, Neb.

LINCOLN, Neb., Sept. 7.—Phillips Petroleum Co. has bought the bulk station and 15 service stations here of the State Oil Co. which was owned largely by R. S. King, president of the Refiners Oil Co., Dayton, O. The company was organized 20 years ago.

L. B. Martin, who has been resident manager of the State company, will go with Refiners Oil at Dayton.

Aiding Pollution Fight

LOS ANGELES, Sept. 6.—In an effort to aid the playground and recreation commission to cut down the pollution of the beaches of southern California, the Richfield Oil Co. of California, has directed all masters of its tanker fleet to discharge ballast at least 50 miles at sea before entering Wilmington harbor, prior to loading petroleum products.

Oily waste has been a source of great annoyance to bathers and this move on the part of Richfield is hoped will be followed by other Pacific Coast companies that ship by tanker. The United States Navy is reported to have consented to dumping the ballast water from its ships at a sufficient distance from the shore to allow the tides to carry it away from the beaches.

Returns to South America

CLEVELAND, Sept. 9.—Charles L. Lockett, South American representative of The International Derrick & Equipment Co., sailed September 7, on the United Fruit Line S. S. Suriname for Maracaibo, Venezuela, stopping enroute in Colombia.

Marland Recovering in Memphis Hospital

HOUSTON, Sept. 7.—Advices from Memphis tell of a successful kidney operation performed, Sept. 6, on Ernest W. Marland, of Ponca City, Okla., head of the producing firm known as E. W. Marland, Inc., and president of the Southland Royalty Co. First advices from the Memphis hospital said the patient was recovering satisfactorily.

Mr. Lockett has been in the states for his vacation. During his visit he has spent considerable time in the Columbus and Beaumont plants of the company, familiarizing himself with a number of articles of new equipment which are shown for the first time at the International Petroleum Exposition next month.

Mr. Lockett has been the representative of Ideco in Venezuela and Colombia for the past year, prior to that time representing his company in the mid-continent and Rocky Mountain divisions.

Standard of Ohio President To Talk on Marketing

CLEVELAND, Sept. 9

"MARKETING PROBLEMS" is to be the subject of the address by W. T. Holliday, president of the Standard Oil Co. of Ohio, at the annual meeting of the National Petroleum Association at Atlantic City, Sept. 18 to 21.

The Standard of Ohio has been experimenting with super-stations within the past year as a part of a general reorganization of its marketing activities. The company has made tremendous gains in gallonage as a result of its campaign.

Dr. George Otis Smith of the U. S. Geological Survey, has been selected as the speaker to discuss the California situation. Dr. Smith has spent a large part of his time in recent months studying conditions in California and seeking to retard development of Kettleman Hills.

G. C. Davison, president and general manager of the Tri-State Refining Co., Kenova, W. Va., is to speak on "How the Oil Industry Looks to a Newcomer."

Willis M. Crane, technical assistant to the president, General Motors Corp., is to talk on "The Future of the Fuel Situation as Seen by an Automotive Engineer." This address will be given on Thursday, Sept. 19, in addition to the talk by Dr. Smith and an address on "Economic Lessons of 1928-1929" by Joseph I. Pogue, petroleum economist.

At the Friday session E. S. Hall of the Standard Oil Co. of New Jersey, will speak on the "Oil Industry's Code of Trade Practices." The address on marketing problems by Mr. Holliday also will be given at this session.

Tributes to the late C. D. Chamberlin, general counsel and secretary of the association during the first 20 years of its existence, will be given by William Muir; Frank B. Fretter, president of the National Refining Co.; Peter M. Speer, general counsel of the Standard Oil Co. of New York; Louis Carruth of the Canfield Oil Co.; and Fayette B. Dow, association counsel.

"The Oil Industry's Public Relations," will be discussed by Victor H. Scales, assistant director, division of public relations, the American Petroleum Institute.

Departmental activity reports will be made at the Wednesday sessions including "The Future of Petroleum Rates," by Willis M. Crane, association traffic counsel; "Cooperative Engineering," by H. A. Ross; "Fire Prevention and Safety," by James H. Herbert of the Standard Oil Co. of Ohio, J. J. Forbes of the U. S. Bureau of Mines and Houston Dunn of the National Petroleum Mutual Fire Insurance Co.

Curb Stations Hit by Texas Ordinances

HOUSTON, Sept. 7.—Municipal authorities in Houston and San Antonio propose the passage of ordinances imposing heavy taxes against curb pumps for dispensing gasoline. The ordinances, which will come up for passage within the next week, are modeled after a similar ordinance in effect in Laredo.

The Houston ordinance provides the following schedule of taxes: within one mile of courthouse, $75 for each gasoline pump, $50 for each oil pump or dispenser; more than one mile and not exceeding two miles, $50 for each gasoline pump, $25 for each oil pump or dispenser; more than two miles, $25 for each gasoline pump and $12.50 for each oil pump or dispenser.

Fred W. Turner, Houston city secretary, is quoted as saying the proposed ordinance is for the express purpose of causing removal of the dispensing apparatus from city curbs. Approximately 2000 pumps would be affected in Houston.

Program for The Ohio Jobbers' Meeting

CLEVELAND, Sept. 9.—Discussion of the code of marketing practices is to have a place on the program, the morning of the second day, of the semi-annual convention of the Ohio Petroleum Marketers Association, Columbus, Sept. 18 and 19.

Some member of the national code committee of the American Petroleum Institute will give interpretations of points in the code and answer questions which the oil men attending are invited to ask.

At noon the first day there will be welcoming addresses, the address of President S. E. McFarren, C. A. Pierce Oil Co., Akron, and the appointment of convention committees.

That afternoon Floyd A. Allen, assistant to the president, General Motors Corp., will talk on "Trends and Policies in Modern Business." He will be followed by A. M. Maxwell, vice-president, Standard Oil Co. of Ohio, whose subject is "Marketing and Marketing Policies with Respect to the Petroleum Oil Jobber." Time is to be given for discussion following Mr. Maxwell's address.

No program has been arranged for the evening of the first day, the management believing the oil men attending would prefer to spend the time informally. In the afternoon the second day, Glenn Griswold, editor of the Chicago Journal of Commerce, will discuss general business conditions in the country. Later there will be an address by Dr. Alfred E. Haake, managing director, American Association of Furniture Manufacturers.

The banquet will be held the second evening at the Deshler-Wallick Hotel. The principal speaker will be E. St. Elmo Lewis, business counselor.

A short talk on "One-Stop Stations" is to be made before the convention by Roger B. Stafford, NATIONAL PETROLEUM NEWS staff writer.

A golf tournament is to be held the afternoon of the 17th, preceding the convention at the Elks' Country Club, open to all oil men. The committee in charge of this consists of C. A. Wagner, Sinclair Refining Co., S. E. Noble, Columbus Oil Co., and R. W Palmer, Shell Petroleum Products Co, all of Columbus.

Plan for Pennsylvania Jobbers' Meeting

CLEVELAND, Sept. 9.—Preliminary plans have been announced for the second annual convention and equipment exhibit of the Pennsylvania Independent Oil Men's Association, to be held at the William Penn Hotel, Oct. 15 and 16, according to Ray Overholser, secretary of the association.

The program is in charge of E. Robinson Jr., of the Pavania Oil Co., Warren. Al Johnson, of Wilkinsburg, is chairman of the entertainment committee.

Cities Service Buys Two Chains in Michigan

CLEVELAND, Sept. 10. — Cities Service Oil Co. has bought the Mutual Oil Co. of Adrian, Mich. and the Grimes & Madigan, Inc., of Grand Rapids.

The Mutual company had 25 bulk stations and 116 service stations in 22 counties in Michigan. The Grimes & Madigan company had a bulk station and 22 service stations in Grand Rapids.

Acquisition of these companies gives the Cities Service organization marketing facilities in more than 4500 communities in the United States, it announced.

Review of Late Production News

CRUDE oil production in the U. S. decreased 17,100 barrels daily average to 2,956,350 barrels per day in the week ended Sept. 7 according to estimates of the American Petroleum Institute.

The reduction was due entirely to a drop in California production. In that state crude output fell 20,700 barrels daily average to 854,200 barrels per day. This is a drop of more than 33,000 barrels daily average in California production within the past two weeks.

Lack of new completions in Santa Fe Springs was largely responsible for the California reduction. Santa Fe Springs field produced an average of 265,000 barrels per day during the week as compared with 284,000 barrels per day in the last week in August, a cut of 19,000 barrels daily average.

East of the Rocky Mountains production increased 3600 barrels daily average to 2,102,150 barrels per day. Crude oil imports fell 26,427 barrels daily average bringing the total new supply of crude down 44,527 barrels daily average to 3,209,779 barrels per day.

Production of the Oklahoma City field increased 4800 barrels daily average in the week but the state as a whole showed a reduction of 350 barrels daily average.

California

CALIFORNIA daily average production for week ending September 7 showed a decline of 25,600 barrels to give a total output of 849,800 barrels. California gas conservation law is not credited with any of this decrease in the state's petroleum yield.

Preparations are now under way by state authorities to file an injunction against operators in the Santa Fe Springs field restraining them from wasting gas. All parties in the field will be party defendant, no single operator being picked out for the test case. Ventura Avenue and Long Beach will follow in the enforcement program of the state officials.

Signal Hill may be extended approximately half a mile to the southeast as a result of a recent completion by the Potolo Oil Syndicate. Considerable leasing is under way as a result of this discovery.

Continental Oil Co.'s Elliott No. 12-8, (formerly belonged to Marland Oil Co.) is still blowing wild in the Kettleman Hills district. Company engineers are attempting to tap the flow line at a distance of 50 feet below the ground surface. Ohio Oil Co. is reported to have penetrated the oil sand on the South Dome of the Kettleman Hills at 6870 feet.

Drilling and leasing continues at an active pace in the coastal strip around Santa Barbara. Lincoln Drilling Co. will drill on the western flank of the palisades field.

Current production in this country by pools is found on page 113.

Oklahoma-Kansas

OF CHIEF interest in the Mid-Continent is the hearing before the state corporation commission of Oklahoma, Sept. 11, on petition of the Indian Territory Illuminating Oil Co. for order restricting production of the Oklahoma City pool and mentioning as a favored plan by operators an absolute shut-down of production for 30 days. Under such order the field, now making more than 60,000 barrels daily, would be removed from the market entirely.

It is believed that there is more than a fair chance that the order will be issued. Some local opposition appearing at first has been ironed out and it is not thought that serious objection will be offered.

The plan is simple, contemplating the absolute shutting in of producing wells, permitting those making appreciable amounts of water to be opened one day each week and taking an additional shut down equal to the time they are thus permitted to produce. Drilling wells would be stopped at their casing point and shut down 30 days from that time.

The Oklahoma City pool production more than equals the amount that is at present going into storage.

With the exception of a 10,000-barrel well in that pool, Mid-Continent operations were featureless.

Texas, New Mexico, Louisiana

THE week's operations in the Permian salt basin geological province turned main attention to the southeastern New Mexico division. In 30-18S-38E, Hobbs area, Humble Oil & Refining Co.'s No. 1 Bowers, flowed 190 barrels in one hour and 25 minutes at 3368 feet. It had been shut down on top of the pay since the rig burned late in August.

Continental Oil Co.'s No. 1 McCallister, 24-26S-36E, swabbed 47 barrels in 12 hours after a 100 quart shot.

In central Cochran county, Texas, 65 miles north and about 15 miles east of Hobbs district development, Continental Oil Co's. A-1 Slaughter wildcat, sec. 130, was reported standing 500 feet of oil in the hole at 4870 feet. It is inside a 33,000-acre block of leaseholds. Geologically, the Cochran county test would be in the Permian basin down from the south flank of the Panhandle (Amarillo) arch. Future developments in the area will be closely watched.

In Gulf Coastal Texas and Louisiana operations were generally of local importance. Pure Oil Co.'s No. 3 Mayes, in the Lost Lake field, Chambers county, Texas, made 1000 barrels initial production of 23.2 gravity oil at 2770 feet. It is the first well in the solidly controlled salt dome field to produce more than 200 barrels daily.

Deepest Well Pumping Water

LOS ANGELES, Sept. 7.—Shell Oil Co.'s Nesa No 11, the deepest well in the world is still pumping about 500 barrels of salt water per day. Company engineers state that they will continue to pump the water out until they are satisfied that there is no possibility of making an oil well out of the hole. They expect to continue drilling if no oil is discovered at the present depth of 9280 feet.

The Editors' Viewpoint

National Petroleum News

Expo. for Practical Field Man Too

EVERY oil producing executive, in the Mid-Continent field particularly, should plan to send a number of field men to the Petroleum Exposition in Tulsa in October.

The heads of some of the producing companies have, in the past, seen the value of a trip to the exposition by their men in the field, the men on the lease whose daily task is the producing of oil as efficiently and at as low a cost as possible. It is now just as much a company duty for the men in these companies to visit the exposition—and take home some ideas from it—as it is for them to attend a meeting called by their production superintendent, or some other company executive.

On their part, the field men have responded to this effort by their company to put before them the progress along inventive lines the oil producing industry is making—to give them a vision of the greater possibilities in their own daily work both for themselves and for their company. Executives of these companies are so certain of this response they are planning this year to send more of their men to the Tulsa exposition.

After all, the efficient operation of the lease, drilling or producing, is just as much bread and butter to the man on the ground, the man who handles the equipment, or superintends its handling, as it is to the executive who perhaps visits that particular lease only a few times a year. It is just as much bread, with the chance for a little more butter on it. Real enthusiasm over their work burns just as brightly in the hearts of many of the men in the fields as it does in the man who directs company or district operations from behind a desk.

The Tulsa exposition fills a need in the oil producing industry such as could be found in but few industries and offers a benefit that the progressive man in the field, and elsewhere, will be quick to take advantage of. Few industries are as widespread in their operations as the oil industry, and but few carry on those operations in territories so isolated even from contact with other lines of industry.

There are oil producing companies operating in Oklahoma which have found it difficult to standardize on certain equipment or methods because different practices had developed on their properties, even in one state, and the individual superintendent of a property, having worked out his problem in his own way, was loath to change to some other way he had never seen demonstrated but was taking on hearsay.

Yet, with all these widespread and isolated operations, it is difficult to think of an industry where progress in adoption of new methods and the development of new equipment has come about faster, made necessary by the continually changing conditions under which oil is produced. The Tulsa exposition has filled a great need for the industry in bringing together the new in methods and in equipment, as developed in producing territories over the entire country, where it can be seen, much of it in operation.

There is much for stimulation of ideas, as well as practical information to be gained from such an exposition, and as much or more for the field man as for the company executives, for the latter has more opportunity at all times, and by training should be quicker, to sense and familiarize himself with changing practice as it develops.

It is only within the last two or three years that the interchange and development of practical ideas among field men from producing properties has been fostered. Field meetings of various engineering groups have brought good attendance not by any means restricted to men with a technical engineering training. The man who has learned through practical experience only has made his ideas felt at these meetings.

This interchange of ideas at field meetings has brought to the men a keener realization of the technical progress being made in the producing industry. It has secured their cooperation to a greater degree in progressive methods put into operation by their own company, by broadening their vision beyond the limits of the property on which their own efforts are employed and showing them the progress being made by the industry at large.

The Tulsa exposition can serve to the same end as these field meetings and even in a more striking manner. The exposition directors this year have planned to appeal to the practical man from the producing properties anxious to learn of the progress in the industry of which he is a part.

For one thing, there is to be little of the distracting carnival atmosphere at this 1929 exposition. In the place of the ballyhooer are to be demonstrations of field practice, the use of new equipment, and so on. Aside from the exposition itself are the meetings of the various engineering groups which are largely practical in nature. Attendance at these meetings on the part of the men from the field is encouraged, also their participation in the discussions.

The inspirational and educational value of the Tulsa exposition quickly came to be recognized as sufficient to establish it as a part of the oil industry. Outside attractions usually found at such expositions are more and more being dropped. The value is just as great for the practical field man as for the company executive. In time many oil companies probably will make it compulsory for their field men to attend and take part in the exposition.
—V. B. G.

THE quite unprecedented plan of removing from the market altogether a field that threatens to bring about waste is important not only at Oklahoma City but in the industry generally. It breaks new ground. As this is written it appears certain that the operators will succeed in getting the corporation commission to recognize the facts in the case and to order the field shut in for 30 days.

The industry appears to be learning how to live under conditions of overproduction. The methods of doing this must be worked out, for it looks as though overproduction—potential or actual—will be a permanent thing for years. One now hears less talk of hard times. It is not that things have improved so greatly but there is reconciliation to the idea of getting along on a basis that will keep the company going and out of debt, even though previous notions of what should be earned have to be forgotten.

It is refreshing to find today's spirit of conciliation and agreement among the executives. We do believe that such spirit is more marked now than at any time in the past. People usually make common cause in their adversity. And some of the things they learn while working together in times of stress may stick and be applied when better conditions arrive, in order that the trouble may not again be so pronounced.

* * *

Economy is a word that is being stressed nowadays. Last week we found a novel application of the principle. D. J. Moran, president of the Continental Oil Co., has, as all the industry knows, been doing quite a lot of economizing. Noting that the old Marland athletic field, just west of the Ponca City offices, was undergoing repairs and enlargement of the grandstand, we inquired whether the company was getting ready for a fall terrapin derby or six-day bicycle races.

Mr. Moran said that the field had been leased to the local prize fighters. Somewhat diffidently he admitted that he can sit in his office on fight nights and with the aid of a good pair of field glasses he has the equivalent of a ringside seat, at no expense.

Champlin Refining Co. last week made its case before the federal radio commission, applying for permission to use 5,000 watts power for station KCRC, Enid, Okla. H. A. Kyler, manager of the station, said it was the intention to specialize in programs of interest to farmers and Indians.

* * *

Refinery workers in the Arkansas City plant of the Shell Petroleum Corp. and other refineries of the company began working Sept. 1 on a schedule which gives one 56-hour and two 32-hour rest periods in each cycle of 27 days. Wages were not reduced. The change makes for a larger payroll.

* * *

Married: J. O. Snowden, of the Prairie Oil & Gas Co.'s land department, Tulsa, and Mrs. Fern Dawson, Tulsa.

* * *

Wiliam O'Driscoll, vice-president of the Gardner Petroleum Co., Tulsa, is president of the new Morris Plan Co. of Arizona. He will move to Phoenix, where the first bank of the new company will be established.

* * *

The big terrapin derby at the 101 Ranch was run off as per schedule on Labor Day, a sorrel reptile by the name of Lilly finishing first and winning for her owners the tidy sum of $6580. A bank cashier and the postmaster at Ralston, Okla., owned the winning "stable." Owners of the winning mount said they gave her carefully chosen diet and plenty of exercise. There were 6530 turtles entered in the affair, most of them failing to make any showing whatever. Frank Moore, of the Continental Oil Co., said his entry found the track too heavy.

* * *

A. B. Rowley, geologist, is now with the Peters Petroleum Corp., which company, headed by Charles B. Peters, is making a sizeable Osage county development campaign.

* * *

H. B. Simcox, who recently moved from Denver to Ponca City, there to be assistant to E. J. Nicklos, vice-president in charge of Continental Oil Co. production, is another executive who early absorbed the atmosphere of Pennsylvania oil fields. He was born and reared right on the edge of the old Bullion field, near Franklin, Pa.

He started dressing tools, while quite a youth, in the '90s and shortly thereafter headed for the territory where activity was greatest. Thus he was in Mexico in 1901, drilling a wildcat 60 miles west of Vera Cruz and in 1903 he had a hand in the Spindletop boom as an employe of the James M. Guffey Petroleum Co.

Eleven years of his life were devoted to The Texas Co. He was assistant general superintendent at Shreveport in 1916 when he was transferred to Denver as general superintendent of the Rocky Mountain division. In May, 1920, The Texas Co. called him to Houston to be assistant to the general manager of production. Just four years later he left the company to return to Denver, this time as manager of production for the Continental and he held this position to the time when Continental merged with the Marland company.

Having covered so much territory, Mr. Simcox's knowledge of producing conditions is broad. He has had to do with all types of production, from the little wells of Pennsylvania to the big fellows of Texas and Oklahoma.

* * *

Lawrence S. (Doc) McGee, for several years the chief scout of the Pure Oil Co., has been transferred to Oklahoma City to have charge of the zone land office which the company is opening there. Mr. McGee will thus be in the "hot" area whose fireworks were set off by the Oklahoma City pool.

To succeed him in Tulsa, J. G. Wakefield has been transferred from El Dorado, Ark. Mr. Wakefield will have charge of scouting and in addition will be assistant to W. C. Connely, head of the land department.

* * *

Roy D. Gwynne, manager in the Mid-Continent for the Joseph Greenspon's Sons Iron & Steel Co., has left that assignment to manage a natural gas system at Beckley, W. Va., which is being installed by the Greenspon interests. C. C. Hurlburt, who has been Mr Gwynne's assistant here, will have charge of the Mid-Continent territory.

* * *

Just to see what part, if any, the Independent Oil & Gas Co. should

play in California, President E. H. Moore, Vice-President Gillette Hill and Chief Geologist A. I. Levorson have gone to that territory for a two weeks' stay. It is probable that they will have something to say soon regarding their entry in California, probably in the purchase of acreage.

* * *

E. W. Marland was reported in newspaper dispatches at the end of the week as resting easily after an operation, performed in a Memphis hospital.

* * *

Because E. A. Landreth, oil operator of Fort Worth, was in a hurry to get to Kansas City, a new record was made between Tulsa and that city—220 miles in an even 75 minutes. Mr. Landreth came to Tulsa from Fort Worth by rail, was hurried to the municipal airport and with Pilot James G. Haizlip started for Kansas City.

* * *

Two months of rainless hot weather ended for Tulsa last week when an old fashioned downpour set in. It was quite welcome to oil operators whose drilling in some areas was slowing up for lack of water.

* * *

A. W. Hickman, formerly manager of the Ohio River producing division of the Pure Oil Co., has been made manager and general superintendent of the Charleston, W. Va., division. The general offices of this division are being moved from Charleston to Dawes, in the Cabin Creek district. Ford Miller succeeds Mr. Hickman at Sistersville.

* * *

T. F. Newman, for five years subsurface geologist for the Midwest Exploration Co. at Amarillo, has joined the Skelly Oil Co. in a similar capacity. He is for the time being making Amarillo his headquarters. George Riggs, Midwest geologist at Roswell, N. M., comes to Amarillo to succeed **Mr. Newman.**

* * *

J. H. Moyer, production superintendent at Russell, Kans., for the Midwest Exploration Co., has been transferred to Amarillo to fill the place of L. L. Bechtel, who recently went with the Dixie Oil Co. at Wichita, Kans.

* * *

Ten Years Ago

(From National Petroleum News, Sept. 10, 1919)

Richard C. Veit, secretary and director of the Standard Oil Co. of New York, dies in Japan.

Newly formed Transcontinental Oil Co. takes over United Producers Pipe Line Co.

Mid-Continent refiners have difficulty in moving products, due to shortage of tank cars.

Drilling Bits Require Proper Heat Treating of Steel

Staff Special
GALVESTON, Sept. 6

EMPHASIS was placed upon the proper working and heat-treating of steel of the body of drilling bits in a paper presented at the A.P.I. engineering group meeting in Galveston, Sept. 5-6, by W. A. Wissler and C. W. Metzger.

Mr. Wissler is research engineer for the Union Carbide and Carbon Research Laboratory, Long Island City, New York. Mr. Metzger is Houston sales engineer of the Haynes Stellite Co.

Acy-acetylene welding was described as preferable practice in the hard-facing of bits.

"Owing to the great variety of steel used for bits," the authors said, "it is impossible to lay down definite temperatures or conditions."

General rules may be discussed, they continued, and detailed information may be obtained from the manufacturer of the particular steel in use. They said further:

"The properties of a steel are largely dependent on the manner in which its constituent elements are combined, and also on the size of the grains into which they are crystallized. Other things being equal, the most desirable structure is one consisting of small grains, such as is found in a steel that gives a fine structure when broken. This condition is necessary if the steel is to have high strength and impact value. Anything that tends to leave the steel with an excessively large grain should therefore be avoided.

"One of the surest ways to produce a steel having exceptionally large grains is to overheat or burn it. Burning a steel consists in heating it to such a temperature that the grains become large and the grains boundaries are greatly weakened. Such steel is very weak and it is impossible to restore its proper properties by any method short of remelting and working.

"Rather high temperatures, in the neighborhood of 2400 F. or higher, are needed to produce badly burned steel, but it is possible to burn the thin edges of a steel bit if heating for forging is done in too hot a furnace. If this should happen the only remedy would be to cut off enough of the bit to remove the burned portion. Badly burned steel will usually crack during forging, and a simple test consisting of attempting to forge or examining the strength of a piece of burned steel will show the great decrease in toughness resulting from such treatment."

After saying it is unnecessary to describe the process of hard-facing in detail, as the manufacturers of alloys furnish all required instructions, Messrs. Wissler and Metzger continued:

"As a general rule it may be said three points should be particularly noted. One of these is to use a flame containing considerable excess acetylene; another is to avoid covering any particles of scale; the third is to allow the hard-facing metal to flow on the sweating surface of the steel. As a general rule, the bit should be preheated before welding, unless it has been thoroughly annealed."

H. B. Simcox, assistant to the vice president in charge of production, ***Continental Oil Co.***

Ralph J. Reed Resigns After 21 Years

LOS ANGELES, Sept. 5.—Ralph J. Reed, chief engineer of the Union Oil Co. of California, ended 21 years of service with the tendering of his resignation to become effective August 31.

Mr. Reed entered the services of the company in 1908, working on a pipeline survey from Coalinga and Kern county to San Luis Obispo. He has held the position of chief engineer since 1918. It is reported that he will take up consulting work soon.

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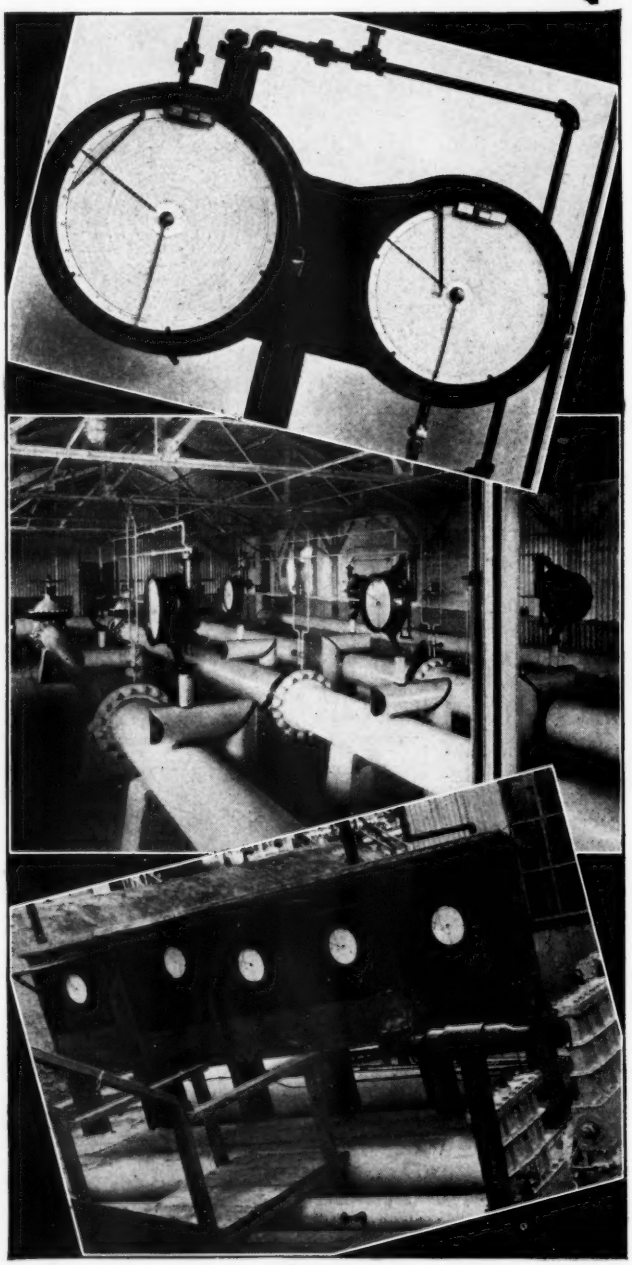

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Oklahoma City Crosses 60,000-Barrel Mark; Large Well Completed

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, Sept. 9

AS IN several weeks past Oklahoma City's oil development held chief attention in Mid-Continent production development. New wells, of which two of major consequence were drilled in were overshadowed by efforts of operators to hold the field to available markets.

The solution of the problem most satisfactory to all, the removal of the pool from the market altogether for 30 days, appeared at the end of the week to have more than a fair chance of success. Hearing will be held by the state corporation commission on Sept. 11 on the petition of operators for an order to restrict production.

During the week the Sinclair Pipe Line Co. became active again in laying a line into the Oklahoma City pool. Survey was made several weeks ago but the company temporarily shelved its plans for entry into the pool. It now plans to go ahead with an eight-inch line from its Payson station, near Shawnee. The new line will be 35 miles long.

New wells in the pool included the Wirt Franklin Petroleum Corp.'s No. 2 Lowery, NE SW NW of 12-11-3W, which was an extension of one and one quarter miles north and the Indian Territory Illuminating Oil Co. and Foster Petroleum Corp.'s No. 1 Fuzzell, SW NW of 19-11-2W. The former well was discussed in NATIONAL PETROLEUM NEWS of Sept. 4. It made 4411 barrels the first 17 hours. Its production for the 24 hours ended at 7 a.m. Sept. 7 was 6130 barrels.

The Fuzzell well is an extension only in the sense that it fills in the pattern of producers in an area where production was certain. It is notable, however, for its size. It blew in while bailing and made 771 barrels the first hour and 15 minutes. The second hour's production was 761 barrels.

The caliber of the well is shown by the fact that it made 10,080 barrels in 21½ hours through a two-inch flow bean, back pressure being 900 pounds. Top of the Siliceous lime was found at 6020 feet and 4¾-inch pipe was set at 6067 feet. Top of the pay streak, and the total depth is 6521 feet.

Water continues to increase in some of the wells. A notable offender in this respect is the Sinclair Oil & Gas Co.'s No. 1 Stamper, whose productive performance was set forth last week as having been improved by deeper drilling. It was then making 2500 barrels of water daily; this has been doubled since that time and the well is making more water than oil. The following table shows the production of the 15 wells producing as of Sept. 7, with the amount of water each was making on that date:

Production of Oklahoma City Pool on Aug. 31 and Sept. 7, 1929

Company	Farm	Loc.	Well No.	Prod. Aug. 31, Bbls.	Prod. Sept. 7, Bbls.	Remarks
Coline	Olds	24-11-3W	1	4,229	4,139	
I.T.I.O.	S. Bodine	24-11-3W	1	925	715	1926 bbl. water
I.T.I.O.	A. Bodine	24-11-3W	2	3,373	3,443	[pres.
I.T.I.O.	Button	19-11-2W	1	4,766	4,713	380 lb. back
I.T.I.O.	Henning	24-11-3	1	1,598	1,162	1485 bbls. water
I.T.I.O.	Fee	24-11-3	1	1,285	1,225	1269 water
I.T.I.O.	Trosper	13-11-3	1	6,129	8,565	
I.T.I.O.	Johnson	25-11-3	1	3,170	off	shut in
I.T.I.O.	Fuzzell	19-11-2	1	.....	10,080	21½ hours
Mid-Kansas	Fortson	24-11-3	1	3,665	3,588	
Mid-Kansas	Fortson	24-11-3	2	2,074	2,272	
Prairie-Slick	Hiddleston	19-11-2	1	3,690	3,655	
Sinclair	Stamper	30-11-2	1	3,485	4,155	5000 bbls. water
Shell	Petty	30-11-2	1	9,506	8,176	
Wirt Franklin	Lowery	12-11-3	2	.....	6,130	
			15	47,895	62,018	

Unless the course of the field is stayed by a proration or shutdown order, it is easily conceivable that it will soon pass the 100,000 barrel mark. Estimates as to what the peak of a field will be are usually idle and a waste of time. Too frequently they rise up like Banquo's ghost to the utter confusion of the persons who make them. In this case, however, it is almost a matter of simple arithmetic. The proven territory is of such extent and the number of wells drilling therein are so numerous as to justify a timid guess like the one just made.

If the Oklahoma City pool is removed from the market by shut-down order for 30 days it will have the effect, statistically, of changing the Oklahoma-Kansas area from a condition of adding to storage to one of withdrawals. Estimates as to the current addition to stocks of crude oil vary, but the conservative estimators say it amounts to 30,000 to 35,000 barrels daily in the two states.

Next in importance in what was a fairly dull week was the Hunton lime discovery of the Amerada Petroleum Corp. and Indian Territory Illuminating Oil Co.'s No. 1 Vineyard, NW NE NE of 15-7-3, Pottawatomie county, 10 miles west and a little north of the limits of the St. Louis pool. It is by no means that much of a wildcat, however, as the Hunton has been persistently drilled in the next township east and other Hunton lime pay has been found in the township where the Amerada et al. got its well.

Top of the Hunton was 4358 feet, total depth 4383, thought to be the base of the Hunton. The well made 325 barrels the first 24 hours, gravity 34° A.P.I. The well was shut in while tankage was being built and it is the operators' intention to proceed slowly in drilling deeper, after giving the well an adequate test at its present depth.

A moderate leasing and royalty play was started by the showing of this well. Amerada, with the Dixie Oil Co. which recently bought a half interest in Amerada's undeveloped acreage, have a large "spread" in the region. Dixie bought from the Lenox Oil Co. four 40-acre leases, all some distance from the well.

In the southeast Earlsboro territory, Secs. 17 and 18, Twp. 9-6, new wells swelled the production which late in the week totaled 38,000 barrels daily from 21 wells. The best well of the week in this area was Minnehoma Oil & Gas Co.'s No. 1 Noe, SW NW NW of 17-9-6. It topped the Wilcox at 4215, had first oil at 4224 feet and late reports gave it a performance of more than 200 barrels per hour.

Magnolia Petroleum Co., which has the largest production in this area, 15,000 barrels, added two good pro-

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ducers to its list, Nos. 5 and 6 Anderson, both in the NE quarter of Sec. 18. No. 5 made 1800 barrels on air lift and No. 6, when put on air lift made 135 barrels per hour.

Other fields of the Seminole area were quiet. The Sasakwa pool, in Twp. 6-8, southeast Seminole county, still has seven producing wells which are making better than 6000 barrels total. The big drilling campaign which threatened two months ago cooled off quickly because of two or three failures drilled in critical locations and operators are content to take their time about the development, feeling their way cautiously.

Operations in Kansas were, for the most part, routine in character. Probably the most important was the finding of oil in a sandy lime at the stratigraphic equivalent of the Wilcox horizon, in a well drilled by John Rogers and others on the Greenwich townsite, where several producers have recently been completed to the chat formation above the Wilcox.

The Rogers well, located 223 feet north and 782 feet west of the SE quarter of the SW quarter of 15-26S-2E, had the pay at 3203 feet and two feet in, the hole filled with oil.

The operators at the end of the week were pulling the big pipe and planned to put the well on the swab. Chat production in this pool has been accompanied by considerable water and several other wells are about ready to be carried down to the new pay.

Pure Oil Co.'s venture into the Siliceous lime in the old shallow territory of Elk county, Kans., does not promise to lead to much further exploration of that horizon. Its No. 16 Chaffin, C NW SE of 14-30-10E, two miles south of Howard, was deepened from original pay in the Oswego lime, old total depth 1644 feet, to Siliceous lime pay at 2287 to 2293 feet.

It was drilled to total depth of 2296 feet. First day's production was 42 barrels of oil and seven barrels of water, the latter coming from the bottom. The next day's performance was 40 barrels oil and 17 barrels water. The oil is 24° gravity, black and carries considerable sulfur.

Notes on the Week

The wildcat of T. B. Slick, NW NW of 13-13-1W, Oklahoma county, found gas in the Oswego lime section in what is thought to be the Prue sand, at 5310-5315 feet and is coring that formation. The gas was in small quantity. The Oswego was topped at 5235 feet. The test is 12 miles east and nine miles north of Oklahoma City pool production.

* * *

Prairie Pipe Line Co.'s deliveries of crude oil in August totaled 6,929,411.96 barrels, a daily average of 223,529 barrels. The record high deliveries of this company were made in July, when a daily average of 227,364 barrels was attained.

* * *

Hearing set for Sept. 4 by the state corporation commission on alleged gas wastage from the I.T.I.O. and others No. 1 Bertha Johnson well in the Oklahoma City pool was called off, as the operators shut in the well.

* * *

The first producing venture of E. W. Marland, Inc., new company started after Mr. Marland's retirement from the old Marland Oil Co., is a small well in the chat formation. It is in the SE NW SW of 30-27S-2E, just east of Wichita, Kans. It had chat formation at 2956 feet and at the end of the week was making 50 barrels of oil and nearly as much water.

* * *

The remote wildcat drilled by the Watsonian Oil Co. in Phillips county, Kans., found granite at 4005 feet and is abandoned. Location was SW SW of 34-2S-19W.

Appeals to Exhibitors at Tulsa Exposition for Hotel Rooms

TULSA, Sept. 7

IN A LETTER addressed to all exhibitors in the International Petroleum Exposition, Oct. 5-12, Chairman Harry B. Gale, of the housing committee, calls attention to a condition that has come about because of the large attendance that is expected this year and asks exhibitors to aid by releasing some of their hotel space.

"There are plenty of hotel rooms in Tulsa," said Mr. Gale, "to take care of the crowd, but we are having difficulty in finding the higher class rooms to take care of the 'key men' of the industry.

"Upon investigation of hotel reservations, we find that a great deal of this difficulty is caused by the fact that exhibitors themselves have in a great many cases made early reservations for blocks of rooms, thereby creating a practical sell-out of the type of rooms which these men desire.

"An analysis of this situation should indicate to the exhibitor that he is thwarting the object he has in view in showing at the Exposition, for the reason that he makes this display to attract buyers and then precludes the possibility of attendance of these buyers by reserving a large percentage of the higher class hotel accommodations for himself.

"We have no criticism to make to the exhibitor for this condition, but merely feel it our duty to bring it forcibly to his attention and ask your cooperation in accommodating men of importance to you. If you have any rooms that you can place at our disposal for part or all of the time of the Exposition, we will see that they are occupied by persons of value to you as an exhibitor.

"An example of this condition is shown by the fact that the 63 directors of the American Petroleum Institute will hold their board meeting in Tulsa Oct. 4, and it has been found impossible to make arrangements to hold these directors over, en bloc, for the week of the show due to the fact that they cannot secure proper hotel accommodations."

That attendance this year should eclipse that of any previous show is indicated by the fact that, with nearly 50 per cent more space available this year in hotels, due to completion of two and enlargement of a third, all suites are taken. There are single and double rooms to be had in several of the smaller hotels, but everything in the five large hotels is gone.

Yount-Lee Buys Smith Discovery Tract

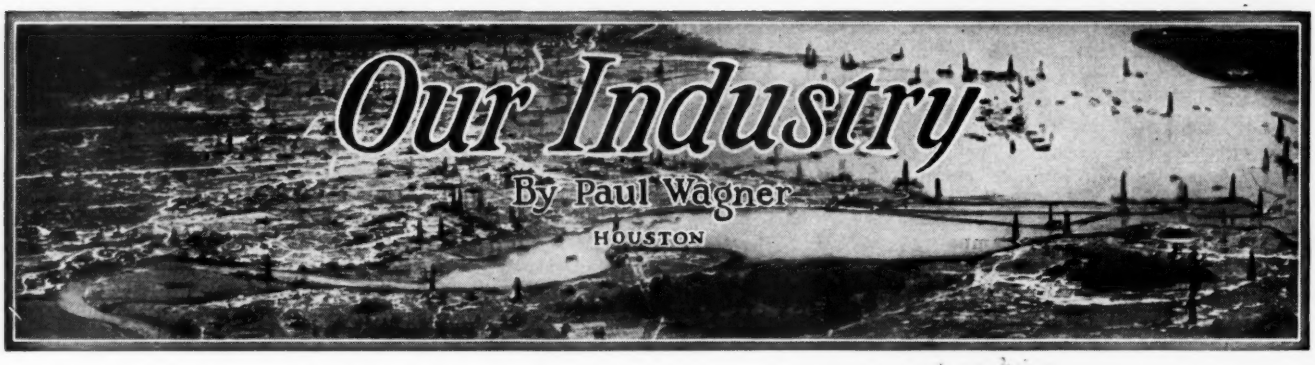
HOUSTON, Sept. 10.—Development of the new Esperson salt dome east of Crosby, in Liberty county, will continue to be carried forward by only two operating interests, the Cranfill-Reynolds Co., and the Yount-Lee Oil Co.

The Yount-Lee Co. concluded purchase this week of the 34.8 acres on which the Esperson dome discovery well was drilled by Harvey S. Smith, Inc., of Houston. Consideration was $500,000, half in cash and the remainder to be paid out of part of the oil produced.

All other acreage on the Esperson dome is controlled by the Cranfill-Reynolds Co., which came into possession of it through the recent consolidation of the Moody-Seagraves properties in Liberty county with the earlier Cranfill & Reynolds partnership, the Cody Petroleum Co., and the Central Texas Refining Co.

Liberty county properties thus controlled were formerly held in the name of the Union Exploration Co., a Moody-Seagraves subsidiary.

NEW YORK, Sept. 7.—The third wire rope conference of the American Society of Mechanical Engineers at 29 W. 39th St., New York, on Sept. 13, has invited oil companies to attend.



ERWIN W. SMITH of the firm of Smith & Gates, Inc., Gulf Coastal operators, who are also largely interested in the Houston Oil Royalty Co., has been spending his vacation with his family at Coronado, California. C. E. Gates of that firm recently returned from a vacation spent near his old home at Frankfort, Michigan. Mr. Gates recently purchased a 33-acre tract on Crystal Lake, where he has a seven room cottage.

* * *

Col. Dan T. Moore, military attache at the White House in the Roosevelt administration and now representing the Northern Pump Co. in southwestern territory, recently returned to his Houston office after a business trip to Milwaukee and Minneapolis.

* * *

Underwood Nazro, ranking vice-president of the Gulf Production Co., in southwestern territory, returned to Houston at the end of August after a trip to Europe. He was accompanied by Mrs. Nazro.

* * *

Henry K. Arnold, assistant to John R. Suman, general production executive of Humble Oil & Refining Co., Houston, spent his vacation in Mexico City. Mrs. Arnold accompanied him.

* * *

Elwood Fouts, vice-president and legal counsel of the J. S. Abercrombie Co., Inc., Houston, spent his vacation in the Rocky Mountain territory. He is senior member of the law firm of Fouts, Ammerman, Patterson & Moore.

* * *

John R. Suman, director and general production executive of Humble Oil & Refining Co., Houston, spent his vacation touring New England territory after a business trip to New York. The first lap of his trip was made by boat, after which Mr. Suman returned home overland in his car, which had been shipped east.

* * *

W. W. Arnoult and S. C. Hart, auditors for the Standard Oil Co. of New Jersey, have completed a four months audit of the books of the subsidiary Transcontinental Petroleum Co., at Tampico. Before returning to New York from Tampico they made a business trip to Mexico City.

L. E. Delcuze, senior assistant in the executive department of the Gulf Production Co., at Houston, spent his vacation in California. He was accompanied by Mrs. Delcuze.

* * *

J. J. Slattery of the geological department of the Transcontinental Petroleum Co., at Tampico, is now on a five weeks vacation in New York. While away from Mexico he will visit home offices of the parent Standard Oil Co. of New Jersey.

* * *

Lloyd P. Lochridge, general sales executive of the Sinclair Companies, with New York headquarters, has just completed a tour of the United States, requiring more than a month. He went west from New York via Chicago, Kansas City, Salt Lake and other points to Seattle and Spokane, thence south along the Pacific Coast to San Diego, thence east by way of Houston, New Orleans and Atlanta.

* * *

George Dyer has been transferred to the Bakersfield, California, district in charge of field operations of the Pacific Western Petroleum Co. He was formerly in a similar position in Los Angeles Basin territory.

* * *

John Franklin Dodge, professor of petroleum engineering in the College of Engineering, University of Southern California, Los Angeles, has become secretary of the national drilling practice committee of the American Petroleum Institute Division of Development and Production Engineering. Roy E. Collom, executive head of the reorganized Continental Oil Co. on the Pacific Coast, is chairman. Mr. Dodge resigned as fuel oil engineer of the Standard Oil Co. of California, effective Sept. 1, to devote his entire time to teaching and to private consulting work.

* * *

Angus McLeod, central division superintendent of the land and geological departments of the Shell Petroleum Corp., with Dallas headquarters, is now on a honeymoon trip to Europe with his bride. Mr. McLeod will visit The Hague, general headquarters of the Royal Dutch-Shell group companies, before his return to America.

Clyde M. Bennett, manager of the crude oil department of the Vacuum Oil Co., Houston, spent his vacation in Bella Vista, Arkansas, with his family. Just before leaving on his trip, Mr. Bennett and W. C. Thomas, manager of the producing department at Houston, made an inspection trip over West Texas territory.

* * *

J. A. (Big Red) Selby of the land department, Vacuum Oil Co., has been transferred to the Houston office from Tyler, East Texas. Before joining the Vacuum organization he had operated independently at Shreveport. Previously he was in the land and scouting departments of Louisiana Oil Refining Corp.

* * *

Under the heading "Of All Things," this delicate touch was added to news reports of President Hoover's contemplated visit to Texas by the somewhat sophisticated magazine known as The New Yorker:

"If his duties permit, the president intends to visit several Texas cities, including Houston. It would be a graceful act if he would lay a memorial wreath upon the convention hall."

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Kenneth D. Pardee, formerly field superintendent of the Turkish Petroleum Co., at Iraq, Mesopotamia, has established headquarters in Conrad, Montana, where he will be district superintendent of The Texas Production Co., Rocky Mountain subsidiary of The Texas Co.

* * *

Frank W. Kirk succeeded the late C. B. McKinney as general manager of the Houston Pipeline Co., gas subsidiary of the Houston Oil Co. of Texas. He had been previously acting general manager.

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F. G. Eggleston of the Rycade Oil Corp.'s production department has returned to Houston from New Mexico, where he spent about three months on business.

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Frank M. (Doc) Seibert, research head of the Gulf Companies at Houston, spent his vacation at his old home in Meyersdale, Pa. E. T. Gregg, also of the research department, spent his vacation in Aspinwall, Pa. Both Messrs. Seibert and Gregg were accompanied by their wives.

G. H. O'Donnell now represents the Cranfill-Reynolds Corp., of Dallas and Houston, in the Rocky Mountain territory. The newly formed Delaware holding company was recently formed to consolidate the operating partnership formerly known as Cranfill & Reynolds, Inc., with the Cody Petroleum Co., in Rocky Mountain territory, and the Gulf Coastal Oil properties of the Moody-Seagraves (United Gas Co.) interests.

* * *

Lyman C. Reed, formerly connected with the Rio Bravo Oil Co., Southern Pacific subsidiary, at Houston, is now a geologist for the Standard Oil Co., S. A., with headquarters at Buenos Aires, Argentina.

* * *

Joe Cook, formerly of the Louisiana Oil Refining Corp., at Shreveport, is now connected with the Woodley Petroleum Co.

* * *

J. L. McMahon, division manager of The Texas Co. in Wichita Falls territory, returned home late in August from a 7800-mile motor trip that included a visit to Quebec. He was accompanied by Mrs. McMahon and their family.

* * *

Raymond H. Goodrich, Gulf Coastal division geologist of the Humble Oil & Refining Co., Houston, in charge of salt dome territory, recently resigned to engage in consulting business for himself. He has established offices on the twenty-first floor of the new Gulf building at Houston.

Mr. Goodrich has been engaged in Gulf Coastal work in Texas and Louisiana for about six and a half years, three years with the Humble and three years and a half with the Rycade Oil Co. Previously, he was with the Amerada Petroleum Corp., in Oklahoma, after taking post-graduate work at Harvard. He is a graduate of the University of Oklahoma.

* * *

Robert T. Lutz, scout for the Humble Oil & Refining Co., at Vernon, Texas, who also edits "The Swab," official organ of the National Oil Scouts Association of America, spent his vacation at Houston and elsewhere in South Texas. Mr. Lutz last year was chairman of the executive committee of the scout association.

* * *

Joseph M. Perkins, who heads geological work for the States Oil Corp., with Eastland, Texas, headquarters, is now a vice president of that company. Activities are mainly in the general Ranger territory, where the States has been an important development unit for years.

* * *

L. J. King, who recently resigned as vice president in charge of the producing division of the Associated Oil Co., Los Angeles, will engage in business for himself on the Pacific Coast. He had been connected with the Associated for many years.

Stanley P. Brown

Stanley P. Brown, sales manager of the Hughes Tool Co., returned to Houston at the end of August after a business and vacation trip that took him to Calgary and other points in Canada. Mr. Brown has occupied his present position with the Hughes company for years and is widely known in oil producing and equipment circles.

* * *

Sam A. Guy, one of the pioneers of Caddo district development at Shreveport, now makes his home at San Antonio. He went there several years ago for his health and has succeeded in regaining it, as attested by the ruddy picture he presents. "I've cheated the undertaker for the last 14 years," Mr. Guy recently told the writer, "and I hope to do it another fourteen."

* * *

W. A. (Bill) Baker, formerly assistant to Ramon Leibensperger in the Tampico organization of the Transcontinental Petroleum Co., subsidiary of the Standard Oil Co. of New Jersey, has succeeded to the position of chief geologist. Mr. Leibensperger, who had occupied that position for the last 10 years, has been transferred to Holland.

* * *

L. R. Conrad, engineer at the Fox field east plant of the Lone Star Gas Co., has been transferred to the Sipe Springs, Texas, territory.

* * *

J. Edgar Pew, vice president and general manager of the Sun Oil Co.'s producing department at Dallas, and president of the Venezuela Sun Oil Co., has been spending a month's vacation at Atlantic City. He was accompanied by Mrs. Pew.

The organization of the Union Oil Co. of California, operating out of Abilene in Texas territory, now consists of Charles H. Sherman, manager, who formerly was in charge of Rocky Mountain territory with headquarters at Fort Collins, Colorado; Sam Grinsfelder, assistant to Mr. Sherman; and W. G. Gallagher, chief geologist.

The company has been active in prospecting work in the shallow sand pay region that fringes the general Ranger lime territory on the west. It also owns considerable wildcat acreage in the West Texas Permian salt basin region.

Three members of the Abilene organization have been transferred to the jurisdiction of the parent company in California, namely, John S. Schalk of the land department; Albert Soles, land man; and James C. Kimble, geologist.

* * *

A San Antonio office has been opened by the Independent Oil & Gas Co., of Tulsa, in charge of Joe Turner, geologist, formerly stationed at Abilene. The new office is in the Milam building. Amerada Petroleum Corp. also has opened a San Antonio office transferring Messrs. Oldham, geologist, from Jacksonville, and Wainwright, land man, from North Texas.

* * *

David C. Harrell, formerly of the Shell Petroleum Corp., at San Antonio, is now on his way to the Dutch East Indies, where he will serve another arm of the Royal Dutch-Shell group companies. He was accompanied by his wife, formerly Miss Oleta May Richey of the Phillips Petroleum Co., at San Angelo.

* * *

Rual B. Swiger is now associated with the Trinity Drillers, Inc., operating in the Luling fault zone district of central south Texas. He was formerly with the Shell Petroleum Corp., in its geological department at San Antonio.

* * *

J. O. Nelson is now connected with the Lion Oil & Refining Co., at El Dorado, Ark., on its geological staff. He recently resigned from the Dixie Oil Co., Inc., subsidiary of Standard Oil Co. of Indiana, at Shreveport, where he was a geologist and geophysicist.

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Nate Isenberger, geologist, is now located in Houston representing the Superior Oil Corp., of Tulsa. He was formerly stationed at San Angelo, West Texas, for the Superior and prior to that represented the Amerada Petroleum Corp. there.

* * *

R. C. Hillyer, chief engineer of the Mexican Gulf Oil Co., at Tampico, is spending a six weeks vacation period at Houston and San Antonio among other places in Texas.

Half Mile Extension to Signal Hill Field Indicated by Petrole Well

By Jack N. Westsmith
N. P. N. STAFF WRITER

LOS ANGELES, Sept. 7

CONSIDERABLE excitement was caused in the Signal Hill field late in the week by the completion of Petrole Syndicate's Meyer No. 1 on the southeast flank of the field. The well was drilled to a depth of 6890 feet, into 145 feet of oil sand and after 48 hours of continuous swabbing commenced to flow slowly. Although at the present time it is reported to be flowing by heads engineers expect to obtain a continuous flow as it cleans up.

If a commercial producer is obtained in the Meyer well, Signal Hill field will be extended half a mile. It is about half a mile southeast of State Co.'s Sievers No. 1, which came in recently for 1500 barrels of oil per day. A number of companies are reported to have secured leases in the southern section of the field as a result of these two completions.

Few completions in the deep zones at Santa Fe Springs contributed to the inability of that field to even approximate last week's production figures. One estimate places the total for week ending September 7 as 265,000 barrels or 22,000 barrels less than for the previous week.

A sharp decline has been registered by heavy producers in the O'Connell sands and on a whole the production average for the month of September is expected to fall below the August average by a considerable amount.

Curtailment effects of the gas law have been negligible so far and practically none of the decrease in the state's total can be attributed to this law.

Production by zones in the Santa Fe Springs area for week ending September 4 were as follows:

Zones	Production	No. wells	Av. per well
Nordstrom	16,340	23	710
Buckbee	23,060	43	536
O'Connell	172,130	94	1831
Clarke	36,640	21	1745
Upper zones	27,225	221	123

Possibilities of a new peak, after a low, in Santa Fe Springs' production curve is likely as soon as active drilling in the center of the field is commenced with the lower Clarke zone as an objective. At the present time nearly all the wells that have been completed in the 3rd Clarke have been in a strip surrounding the productive area of the O'Connell zone.

That this deepest zone has highly potential possibilities is indicated from the size of the outpost completions. MacMillan Petroleum Corp. obtained a 4000 barrel well of 33 gravity oil from the 3rd Clarke zone when it came in from a depth of 7950 feet. If this well is indicative of what the inside wells may produce it is no wonder that operators at Santa Fe Springs are very optimistic.

Union Oil Co. killed its Alexander No. 16 during the latter part of August because of its abnormal oil to gas ratio. The well at the time it was killed was making 3879 barrels of oil and 30 million cubic feet of gas. Tubing was lowered from 6171 feet to 6703 feet and the well recompleted for 3100 barrels of oil and 13.8 million cubic feet of gas. Natural decline has cut the output to 2697 barrels at the present time.

Other companies are making preparations to kill wells with large oil to gas ratios and to attempt a similar method for cutting down the gas output. Wells with small oil to gas ratios can be subjected to suitable pressure control much more easily than where 10,000 cubic feet of gas comes out of the ground with each barrel of oil.

Methods similar to those employed in putting out fires in the oil fields are being used by Continental Oil Co. engineers in their attempt to bring the Elliott No. 12-8 in the Kettleman Hills area under control. Crews are digging a tunnel aimed for a point approximately 50 feet below the derrick floor from a distance of 100 feet horizontally from the mouth of the casing. Approximately 1500 barrels of oil is being recovered from the sump hole per day and it is estimated that from 1000 to 1500 barrels are being lost into the ground and through evaporation.

Ohio Oil Co. in its Well No. 1 on the South Dome of Kettleman Hills—the only drilling well on the South Dome—is reported to have picked up oil sand at 6870 feet. This is 300 to 400 feet deeper than the depth at which the oil sand is first penetrated in the North Dome.

Extensive drilling continues in the coastal area around Santa Barbara. Lincoln Drilling Co. who discovered the deeper sand in the old Summerland field is reported to be leasing considerable property west of the Palisades field, west of Santa Barbara. This field was discovered several months ago by Olympic Oil and Refining Co. in its Lomas well but has so far failed to live up to expectations of 50 operators who lost several million dollars without getting a drop of oil.

A possible move on the part of operators to secure additional oil in case state officials are successful in preventing the waste of gas, was indicated by Richfield Oil Co. when it opened up 11 wells on the Kern Front for an output of 3000 barrels per day. All of the wells have been shut in since they were completed under an agreement among operators in that area.

These wells are all located on Section 22-28-27, Kern County. Thirteen completions, averaging 300 barrels each, have been brought in since March 1929. A defensive drilling program has been adopted by Richfield in this area with the result that 17 additional wells are to be drilled by two rigs constantly in operation.

Two of the above completions are offsets to wells that have remained shut in and they will remain shut in until such time as more oil is needed or until the offset wells are opened up.

It is estimated that this property should be capable of producing 7500 barrels daily for a long period of years as records show that wells drilled in the Kern Front while having a small daily output usually have a long life.

To Build Gasoline Plant

LOS ANGELES, Sept. 6.—The State Gasoline Corp. has let a contract for a 30,000-gallon natural gasoline plant, to be built in Long Beach, Pine at 31st street, the J. A. Campbell Co. receiving the award. Time for completion is set for 35 days.

This installation calls for an unusually large amount of heating surface, as well as cooling and condensing surface.

Standard Power Rate Structure Urged

GALVESTON, Sept. 6.—Discussing a standard power rate structure for oil fields, in a paper presented at the Galveston engineering group meeting of the American Petroleum Institute, Sept. 5-6, E. Stanley Durward, divisional mechanical engineer of the Shell Petroleum Corp., Dallas, urged that a conference on the whole question of rate structures should be engaged in by committees of the A.P.I. and electrical power suppliers.

"Such a conference," he said, "should result in a better understanding of the other party's problems and in a mutually satisfactory schedule of rates.

"In many cases the present rates are unsatisfactory to oil operators and, while electric power has its advantages, the operators cannot afford to use it on account of its prohibitive costs. In order to obtain the oil operator's business the electric power companies must improve their methods of rate making, so that they will be uniform and competitive with other forms of power used by the oil industry; otherwise, the oil operators will obtain the advantages of electric power by erecting their own generating plants.

"With modern equipment now on the market, it is possible, even on quite a small scale, to erect semi-portable or permanent plants and supply power at the well at less cost than power companies will now supply it to the small or medium demand customer."

Appoints Sales Representative

TULSA, Sept. 5.—The Eldorado Refining Co. of Eldorado, Kan. has announced the appointment of Elwood Davis as sales representative in the northern Iowa territory. Mr. Davis began his retail and wholesale marketing career with the Moore Oil & Refining Co. of Cincinnati, later joining the Sinclair Refining Co., and then the Marland Refining Co. The employment of Mr. Davis is another step in the El Dorado company's plans of building up a distribution direct with the jobbers in the normal marketing territory of Kansas refiners.

Osage Damage Settlement Methods Approved

TULSA, Sept. 7.—Members of the Osage Oil & Gas Lessees Association have been notified by Secretary Harry H. Smith that the association's contentions respecting the manner of settlement of damages to the surface of an Osage lease have been tentatively accepted by the department of the interior.

Since Congress passed the bill extending the period of the Osage tribal trust, revisions in the regulations governing leases have been made. Osages sought to perpetuate the provisions in former leases, which sought to enumerate the damages the lessee would be liable for. The association objected to such specific setting forth of the claims, except as to a fee for the use of land for well locations, tanks, etc.

The new lease provision provides for the arbitration of all claims other than locations and tank sites. The new regulations will say that the aggrieved party shall notify the lessee within 10 days after discovery of the alleged damages and if the matter is not settled within 20 days after receipt of the notice, each side of the controversy shall choose an arbitrator and the two shall select a third. Any two of the three may make the award. Either party to the dispute may take the matter into court if he is not satisfied with the decision of the arbitrators.

Another helpful point in the new regulations is that a lessee may have free use of water for drilling purposes, provided he does not diminish the supply below the requirements of the surface owner. If the water supply is located off the lease, the operator may lay lines to obtain it.

Study of Protective Line Coatings Suggested

GALVESTON, Sept. 6.—To those who are interested in the protection of underground pipes against corrosion two suggestions were offered in a paper presented before the Galveston meeting of the Texas-Louisiana-Arkansas engineering group of the American Petroleum Institute, Sept. 5, by Dr. Gordon N. Scott, A.P.I. research associate with the United States Bureau of Standards Washington.

The Bureau of Standards and the American Petroleum Institute have been engaged recently in collecting information pertinent to the problems discussed and, Dr. Scott said, most of the data is available to the industry now.

If a protective coating has been applied to a line, one of his suggestions is that the behavior of that coating with time should be critically studied.

Penetration of the coating, as evidenced by the appearance of rust or other indications of active corrosion, should be carefully followed. No better test of a protective coating exists, he has found, than a practical application of that coating on a line.

Continuing, he said:

"The most important conclusion to be drawn at present, however, is that the indiscriminate use of protective coatings is likely not to be most economical. The second suggestion is, therefore, that realizing the complexity and importance of the problem, all elements in the industry should take an active interest in getting together more complete data which will help in combating the common enemy.

"No better test of a protective coating can be made than a practical application of that coating on a line, but it would be prohibitively expensive for each company separately to collect information regarding the many coatings offered.

"If, however, each important user of coatings would study its own coatings critically and all could bring their results together following either the scheme suggested above, or some other plan, the economic benefits ought to be large and immediate."

Completions in North Louisiana and Arkansas, Week Ended September 5, 1929

Louisiana—Caddo Parish

Company	Well	Location	Depth	Yield
H. J. Bussa	Huckabay-Odell No. 7	15-21-15	1710	15 bbls.
W. D. Chew	Le Vee Board C-1	34-21-16	1826	40 bbls.
W. D. Chew	Le Vee Board C-2	34-21-16	932	5 bbls.
Falcon Oil Co	Nunnely No. 1	29-20-15	2326	40 bbls.
A. H. Tarver	Glassell-Dickson No. 1	31-20-14	2470	salt water, abd.
	Jackson Parish			
Geo. O. Baird	Tremont Lbr. Co. No. 1	24-18-1W	3662	dry, aband.
	Morehouse Parish			
Grecian Bond Gas Co.	Seacreaves No. 1	14-20-4E	2185	7M gas
	Ouachita Parish			
LaDel Oil Properties	Fee No. 46	30-20-4E	2191	1½M gas
J. B. Bond	C. Bragerton No. 2	19-19-4E	2190	3M gas
Pipes & Mack	Schultz No. 1	13-18-4E	2236	¾M gas
James Potts, Tr.	Potts No. 3	7-18-4E	2223	4M ft. gas
Magnolia Pet. Co.	Fee No. 404	12-19-5E	2304	12M gas
	Richland Parish			
S. R. Humble	Louisiana Oil No. 1	22-17-6E	2483	salt water, abd.
	Webster Parish			
Magnolia Pet. Co.	Roseberry No. 1	19-23-9	2770	110 bbls.

East Texas—Panola County

Company	Well	Location	Depth	Yield
Adams & Weller	Adams No. 6	B. C. Jordan HRS	954	1M ft. gas
D. Thomason	Trosper No. 3	Jane Tahrpe HRS	2365	1M ft. gas
	Arkansas—Calhoun County			
Phillips Pet. Co.	Freeman-Smith Lbr. Co. No. 1	26-16-13	3332	dry, aband.
	Ouachita County			
Magna Prod. Co.	Linihan B-5	36-15-16	2013	20 bbls.
Phillips Pet. Co.	Scott No. 2	34-15-15	1979	246 bbls.
Phillips Pet. Co.	Scott No. 3	34-15-15	2002	190 bbls
Sundby et al	Farris No. 1	27-15-15	2111	20 bbls
	Union County			
O. W. Estes	Rowland No. 3	14-17-14	3253	dry, aband.
Ohio Oil Co.	M. H. Nash No. 1	7-17-13	3283	dry, band.
Ohio Oil Co.	Stout Lbr. Co. 1 Acct. No. 2	30-16-13	3222	dry, band.
Pure Oil Co.	E. F. Gregory No. 10	10-17-14	3158	50 bbls.
E. L. Chapman	Bradley No. 1	2-16-16	2050	15 bbls

Completions in Oklahoma and Kansas, Week Ended September 7, 1929

OKLAHOMA

Beckham County

Company	Well No.	Location	Depth	Init. Prod.
Pease et al	1	NEc NW 23-9-23 W	T.D. 2784	Dry
Prod. Explor	..	SE SW SW 17-9-22 W	T.D. 2402	Dry
M. T. C. Oil Co.	1	NEc 35-9-22 W	T.D. 1500	Dry

Caddo County

Company	Well No.	Location	Depth	Init. Prod.
Hartley et al	1	SEc NW SE 29-5-12 W	T.D. 3394	Dry
Caddo	1	NW NE NW 9-5-9 W	T.D. 2420	Dry
Bullock et al	2	SWc NW NW SE 12-5-9 W	T.D. 2130	Dry

Cotton County

Company	Well No.	Location	Depth	Init. Prod.
Payne-McGaha	1	NW SW SW 19-4-11 W	T.D. 3505	Dry
Perkins-Cullum	4	SW SE SE 34-1-10 W	2180-2198	10
Shasta	1	NWc SW NW NE 2-2-10 W	2133-2140	100

Creek County

Company	Well No.	Location	Depth	Init. Prod.
Texas	2	SE NE SE 14-17-10 E	1880-1929	30
Carter	1	NEc 18-16-9 E	3000-3011	OWD 1015
Texas Pacific	8	SW NW NW 17-16-9 E	2658-2678	15
Wells et al	3	CWL NW NW 10-18-11 E	T.D. 1890	Dry

Garvin County

Company	Well No.	Location	Depth	Init. Prod.
Tidal	1	C SW NE 8-4-2 E	T.D. 4055	Dry

Hughes County

Company	Well No.	Location	Depth	Init. Prod.
Jarvis-Hom	3	SE NW NW 21-7-8 E	3100-3132	75
Furhman	2	C SW SW 21-9-10 E	2759-2766	OWD 6M

Jackson County

Company	Well No.	Location	Depth	Init. Prod.
Houseman et al	1	NEc 4-1-20 W	T.D. 2020	Dry

Jefferson County

Company	Well No.	Location	Depth	Init. Prod.
Perace-Brown	1	SEc SW 13-6-7 W	T D. 2501	Dry

Kiowa County

Company	Well No.	Location	Depth	Init. Prod.
Hyde	1	SEc 22-3-18 W	T.D.510	Dry
Conner-Son	1	SEc NW NE 26-7-16 W	T.D. 2535	Dry
Eshelman et al	1	NEc SW NW 18-6-16 W	388-396	20

Muskogee County

Company	Well No.	Location	Depth	Init. Prod.
Neeley	11	CSL SE NW 14-14-16 E	T.D. 1505	Dry

Okfuskee County

Company	Well No.	Location	Depth	Init. Prod.
Mid-Continent	2	SW SE NE 31-11-11 E	3118-3129	2M
Champlin	13	SEc 15-11-11 E	1630-1670	6

Okmulgee County

Company	Well No.	Location	Depth	Init. Prod.
Misener-Mid-Cont.	2	CEL NE SW 10-15-14E	887-1003	15
Kirkland-Son	4	SWc SE SW 17-15-13 E	1447-1535	8
Sheridan	2	SWc NE NW SW 3-15-11 E	2245-2264	OWD 5

Osage County

Company	Well No.	Location	Depth	Init. Prod.
Jennings	1	NWc SW 32-29-12 E	841-854	5
Osage Gas Prod.	394	NEc SW SW 29-28-11 E	1821-1848	1.5M
Silurian	57	NE NW NW 17-23-12 E	1470-1539	40
Branstetter et al.	1	SEc SW 23-23-10 E	1754-1781	40
Branstetter-Barnsdall	4	CEL SE 22-22-11 E	1605-1645	20
Moore et al	8	NWc NE NW 16-21-9 E	2005-2058	20
Okla. Power & Water	116	NWc SW 28-21-10 E	T.D. 2505	Dry

Pawnee County

Company	Well No.	Location	Depth	Init. Prod.
Chamberlain	1	SWc NW 26-20-9 E	2150-2157	80

Pottawatomie County

Company	Well No.	Location	Depth	Init. Prod.
Wilcox	7	SW NE SE 8-8-5 E	4058-4060	395
Warner-Quinlan	1	NEc SE 18-7-4 E	4065-4178	100
Independent	2	NE SE SW 17-7-4 E	4175-4210	600
Darby	5	SW NE NW 16-7-4 E	4028-2055	500
Indep.-Westland	4	SE NW NW 16-7-4 E	4030-4153	265
Magnolia	1	NEc SE 15-7-4 E	4007-4185	OWD 8
Martin-Erwin	3	NW NE NE 2-7-4 E	4040-4245	480
Magnolia	1	SW SE SE 7-7-5 E	T.D. 4356	OWD Dry
Carter	1	NEc SE 2-7-4 E	T.D. 4377	Dry
Slick	2	SWc NW 20-6-4 E	T.D. 4092	Dry

Seminole County

Company	Well No.	Location	Depth	Init. Prod.
Pure	1	SE NE SW 22-7-6 E	T.D 3665	Dry
Magnolia	6	SEc NE 22-7-6 E	T.D. 3173	Dry
Barnsdall	5	NEc SE 22-7-6 E	T.D. 3150	Dry
Gypsy	3	SW NW SE 32-10-6 E	4315-4327	310
Pure	2	NWc 14-9-7 E	4208-4212	60
Continental	4	NE SE NW 18-9-7 E	3938-4035	2550
Devonian	1	NE NW NW 18-9-7 E	3547-3565	30
Pure	11	NEc 23-7-6 E	3200-3204	575
Texas	6	SWc NW 23-7-6 E	3132-3149	525
Gypsy	11	NW SE SE 14-7-6 E	3164-3186	39M
Champlin	3	NE SE NE 14-7-6 E	3280-3295	390
Independent	6	SWc 13-7-6 E	3282-3297	300
Texas	12	NW NE NE 19-5-8 E	2512-2590	385

Stephens County

Company	Well No.	Location	Depth	Init. Prod.
Magnolia	2	NWc SW NW SW 34-1-8 W	2215-2218	40
Pace et al	9	SWc NE SE NE 13-2-8 W	1490-1494	20

Wagoner County

Company	Well No.	Location	Depth	Init. Prod.
Orr	4	NEc SE SE SW 34-17-18 E	408-421	OWD 25
Dixon et al	2	SWc NW 36-16-17 E	870-886	2M

KANSAS

Chase County

Company	Well No.	Location	Depth	Init. Prod.
Shedy et al	1	NEc SE 24-21-9 E	2245-2272	30

Ellis County

Company	Well No.	Location	Depth	Init. Prod.
Phillips	1	SWc NE 9-13-19 W	3593-3595	100
Burgher et al	1	SWc NW 20-11-17 W	3420-3440	60
Davis-Hazlett et al.	3	SE NE NE 1-13-16 W	3100-3115	100
Phillips	1	NEc SW 8-12-17 W	T.D. 4017	Dry

Greenwood County

Company	Well No.	Location	Depth	Init. Prod.
Ward-McGinnis	1	NE NW SW 13-25-10 E	T.D. 1970	Dry
Empire	2	CWL SW NW 36-23-11 E	T.D. 2424	Dry
Theta	1	SE NE SW 15-22-12 E	T.D. 1780	Dry
Empire	2	SE SW SE 15-22-12 E	T.D. 1907	Dry
Empire	1	NWc NE 28-22-10 E	T.D. 2914	Dry

Marion County

Company	Well No.	Location	Depth	Init. Prod.
Shell	1	NWc NE 34-18-2 E	T.D. 3002	Dry
Tidal	2	NE SW SW 7-19-3 E	2851-2871	30

Russell County

Company	Well No.	Location	Depth	Init. Prod.
Texas	2	SW NW NW 6-13-15 W	2992-3026	40
Liggett et al	1	NWc 20-12-15 W	2981-3020	75
Allison et al	1	NWc SE 5-14-12 W	T.D. 3387	Dry

Rush County

Company	Well No.	Location	Depth	Init. Prod.
Barnsdall	1	SEc 21-17-17 W	T.D. 3606	Dry

Sedgwick County

Company	Well No.	Location	Depth	Init. Prod.
Sullivan et al	1	NE NW NW 29-27-1 E	T.D. 3606	Dry
Hammond et al	1	SWc NW 23-27-2 W	T.D. 4186	Dry
White Eagle	2	SE NE SE 20-28-1 E	3099-3109	275
Bu Vi Bar et al	3	CWL E½ SE 12-26-1 W	3360-3365	555
Shell	1	SE NW SW 15-26-2 E	2897-2900	840
Ramsey et al	3	SEc NW SE SW 15-26-2 E	2930-2933	1200

Sumner County

Company	Well No.	Location	Depth	Init. Prod.
Gypsy	1	SE NW SW 16-25-3 W	4763-4764	2665
Gypsy-Blankenship	1	C SW NW 27-34-4 W	T.D. 5053	Dry

Completions in California, Week Ended August 31, 1929

Long Beach

Company	Well No.	Location	Depth	Init. Prod.
Marland Oil Co	Bixby No. 14	....	4547	1500

Santa Fe Springs

Company	Well No.	Location	Depth	Init. Prod.
General Pet. Corp.	S. F. C. 179 F	....	6945	3400
General Pet. Corp.	S. F. S. 224	....	6800	2000
Shell Oil Co.	Slusher B. 1	....	6850	2150
Standard Oil Co.	Jordan No. 7	....	7970	3570
Standard Oil Co.	Johnson No. 7	....	8050	1800
York-Lockhardt	No. 2	....	6745	600

Athens-Rosecrans

Company	Well No.	Location	Depth	Init. Prod.
Union Oil Co	Rosecrans No. 14	....	5615	700

Ventura Avenue

Company	Well No.	Location	Depth	Init. Prod.
Shell Oil Co	Gosnell No. 33	....	7381	325

Midway-Sunset

Company	Well No.	Location	Depth	Init. Prod.
Union Oil Co	Houchin No. 4	10-11-23	5555	100

Belridge

Company	Well No.	Location	Depth	Init. Prod.
Ohio Oil Co	No. 30	30-28-21	710	60

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended Sept. 7, 1929

OKLAHOMA

Carter County

Company	Well No. & Farm	Location
Magnolia	2-Powers	NW NE NW 4-2-3 W

Cotton County

Company	Well No. & Farm	Location
Baldwin-Sultan	4-Thone	SEc SW SE SE 35-1-10 W
Franklin	2-Chambers	SEc NE SW SE 35-1-10 W
Scott-Arrington	1-Cogswell	SEc NW SE 26-1-10 W
Shasta	3-Slogan	NWc NE NE 2-2-10 W
Shasta	2-Slogan	NW NE NE 2-2-10 W

Cleveland County

Company	Well No. & Farm	Location
Brownfield et al	1-Corbett	SEc NW 20-6-1 E

Creek County

Company	Well No. & Farm	Location	
Gled	1-Monday	NWc NE SW 25-19-8 E	
Sooner	1-Calvin	NWc SE SE 31-19-11 E	
Indep. et al	1-Davis	SEc NW SE 20-18-8 E	
Wright Est.	25-Tahkaney	NWc NE NE NW 24-17-10 E	
Carter	7-Durant	SEc SW NE 18-16-9 E	OWD

Grady County

Company	Well No. & Farm	Location
Meridian	1-Kinnaird	CNL NE NE 34-4-8 W

Hughes County

Company	Well No. & Farm	Location
McCulloch	1-Scott	NWc NE 23-6-8 E

Jefferson County

Company	Well No. & Farm	Location
Barnes	1-Stanfield	C NW SE 33-7-6 W

Kay County

Company	Well No. & Farm	Location
Parrish et al	1-Whitesides	NE SW SW 25-28-1 W
Decamp et al	1-Sharp	C SE NE 25-28-1 W

LeFlore County

Company	Well No. & Farm	Location
LeFlore County	2-Jackson	NEc SW SW SE 28-7-26 E

Muskogee County

Company	Well No. & Farm	Location
Robinson Bros.	4-Lewis	NWc SW NW NE 8-13-16 E
Bement	1-Bruner	CNL NE SE 15-13-16 E
Seminole	1-Murrell	NWc SE SE 16-15-18 E

Okfuskee County

Company	Well No. & Farm	Location
Mid-Continent	3-Dindy	SWc NE 31-11-11 E
Sunray	2-Wilson	NEc SE NW 31-11-11 E
Regal	9-Bigpond	CNL SE NE 11-10-11 E

Oklahoma County

Company	Well No. & Farm	Location	
Sinclair et al	5-Stamper	NE SE NW 33-11-2 W	
Shell	4-Petty	SW NW NE 33-11-2 W	
Shell	5-Petty	NW SW NE 33-11-2 W	
I. T. I. O.	1-Okla. City	SE SE 24-11-3 W	OWD

Okmulgee County

Company	Well No. & Farm	Location
Foreman-Wise	6-Rowe	NWc NE NE 10-15-14 E
Kirkland-Son	4-Prince	CEL NW NW 23-15-13 E
Getzendamer et al.	6-Coleman	CSL NW SW 29-15-11 E
Whitfield et al	4-Grayson	NEc SE NW SW 3-15-11 E OWD
Levine et al	1-Holcomb	SWc NW SE 24-14-12 E OWD
Penrod-Thompson	9-Reynolds	SW SE NW 15-13-14 E OWD
Sheedy et al	15-Meyers	NWc SE SW 23-13-14 E

Osage County

Company	Well No. & Farm	Location
Osage et al	395....	CSL NE SW 29-28-11 E

Pawnee County

Company	Well No. & Farm	Location
Hay et al	3-Copeland	NWc SW 26-20-9 E
McMan et al	2-Johnson	NEc SE 27-20-9 E
Johnson	1-Byles	SEc NE 27-20-9 E

Payne County

Company	Well No. & Farm	Location
Transcontinental	1-Lincoln	NWc SE 4-18-5 E

Pontotoc County

Company	Well No. & Farm	Location
Belchie-Laskey	1-Willamson	NW NE SW 32-5-7 E
Transcontinental	3-Bolen	SE NW NW 19-5-5 E
Homaokla	5-Ritchie	SEc 1-4-7 E
Homaokla	6-Ritchie	NW SE SE 1-4-7 E

Pottawatomie County

Company	Well No. & Farm	Location
Magnolia	1-Jordan	SE NW SE 12-7-4 E
Indep.-Darby	2-Davis	SE SW NE 15-7-4 E
Houston	5-Wyatt	SE NE SW 17-7-4 E

(Continued on Page 55)

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended Sept. 7, 1929

(*Continued from Page 54*)

Company	Well No. & Farm	Location	Survey
Seminole County			
Houston	6-Wyatt	SW NE SW 17-7-4 E	
Slick	3-Alexander	NWc SE 19-6-4 E	
Burke-Greis	2-Nevins	SW SE SW 32-10-6 E	
Minnehoma	2-Nice	SW SE NW 17-9-6 E	
Gypsy-Devonian	7-Payne	NE SE SE 18-9-6 E	
Gypsy-Devonian	8-Payne	SW SE SE 18-9-6 E	
Sinclair	1-Jefferson	NE NW NE 19-9-6 E	
Gypsy-Devonian	9-Payne	SE SW SE 18-9-6 E	
Wrightsman	2-Green	NEc 19-9-6 E	
Magnolia	1-Brane	NEc 8-7-7 E	
Reiter-Foster	4-Bunyard	NE NW SW 14-7-6 E	
Mid-Continent	4-Harjo	SEc NE 14-5-7 E	
Mid-Continent	11-Smith	SW NW SE 5-7-7 E	
Stephens County			
Meridian	1-Collins	C NE NE 12-1-9 W	
Mid-Tex	1-Massey	NEc NW 36-1-6 W	
Lesh-McCall	1-Wilson	SEc SW SW NE 17-2-7 W	
Pace et al	1-Johnson	SEc NW 16-2-7 W	
Tillman County			
Dean-Adkinson	1-Kent	NWc 6-5-14 W	
Chenault-Staley	1-Crane	NEc SE 25-4-14 W	
Tulsa County			
Superior	1-Johnson	SEc NE NW 18-19-12 E	
KANSAS			
Barton County			
Allison-Fitzwilliams	1-Brodie	NEc 19-16-12 W	
Butler County			
Sanford	1-Covert	NEc SW 10-28-5 E	
Lewis Prod	1-Lill	SEc 18-27-7 E	
Cowley County			
Trees	1-Adams	C NW NE 12-34-6 E	
Ford County			
Swain et al	1	C NW 21-25-24 W	
Greenwood County			
Eureka	1-Edwards	NWc SW 35-23-11 E	
Kite et al	1-Peeples	NEc 33-23-11 E	
Carey-Simmons	1-Lufebure	NW NE NE 14-23-11 E	
Simmons	1-Steele	SEc NE 32-22-12 E	
Empire	1-Norton	NE SW NE 22-22-12 E	
O'Neil	1-Blakely	SW NE SW 9-22-11 E	
Harvey County			
Walton	1-Neiman	C SE SW 13-24-2 E	
Kingman County			
Fleeger	1-Ashcraft	CEL W½ E½ 16-28-7 W	
Rice County			
Burgher	1-Fair	SE NE NE 14-21-10 W	
Russell County			
Keys	11-Mermis	NE SW NE 32-13-15 W	
Midwest Explor.	31-Benso	SWc 4-14-15 W	
Midwest Explor.	1-Brungardt	SW NW NW 31-12-15	
Sedgwick County			
Jones et al	1-Missour Pacific	SWc NE SE SW 15-26-2 E	
Deal-Shell	2-Bogue	SWc SE SW SW 15-26-2 E	
Deal-Shell	1-Bogue	NEc SE SW SW 15-26-2 E	
Deal-Shell	1-Wilson	NWc SW SE SW 15-26-2 E	
Stevens County			
Trees	1-Grundy	C SW 3-35-38 W	
McKenna et al	1-Carpenter	NW NW 29-33-36 W	
Woodson County			
Twedell et al	1-Kemmer	SWc SE 15-24-15 E	
TEXAS			
NORTH CENTRAL & EAST CENTRAL			
Anderson County			
Magnolia	1-Williams		Bledsoe
Keen et al	1-Murdock		Broomfield
Brown County			
Amerada	2-Edmundson		Townsend
Burnas et al	1-Gwathney		Harris
Lloyd	24-Collins	Blk-139	Smith
French et al	2-Belvin		Chaddick
Smith	3-Trucheart	Blk-638	Lamar
Smith	4-George		Chaddick
Lloyd	5-Duff	Blk-624	Kenney
Callahan County			
Beams	6-Jackson	Sec-14	ET
Moutray	48-Hickman	Sec-149	BBB&C
Woodley	3-Finley	Sec-74	BOA
Moutray	1-Brown	Sec-47	D&DA
Westhook	1-Westhook	Blk-153	Robinson
Behart-Sullivan	4-Harr	Sec-71	GH&H
White Eagle	9-Morris	Sec-25 Blk-722	Webber
Coleman County			
Westhook	1-Westhook	Blk-153	Robinson
Behart-Sullivan	4-Harr	Sec-71	GH&H
White Eagle	9-Morris	Sec-5 Blk-722	Webber
Eastland et al	12-Morris	Sec-24 Blk-722	Webber
McCamey et al	2-Smith	Sec-35	GH&H
Stepp-Kiester	5-Moody	Sec-12 Blk-665	Scott
Shallcross et al	1-Bringham	Blk-54	McElreath
May et al	1-Brooks	Blk-4	Walker
Eastland County			
Wood et al	1-Dunham	Sec-10 Blk-2	H&TC
Hill County			
Burnham	1-Holderman		Sullivan
Jack County			
Panhandle Prod	1-Daniels et al.		Hugham
Harper et al	5-Box		Hughson
Harper et al	2-Eagle		Hughson
F. H. E. Oil Co	4-Leffell		Hughson
Limestone County			
Haskell et al	1-Strange		Holloway
Palo Pinto County			
Lindsay Drlg	1-Costello Bros.		Castleman
Texas Pacific	160-Stuart	Sec-71 Blk-4	T&P
Shackleford County			
Big State	12-Webb-Russ	Sec-17 Blk-11	T&P
Choater et al	1-Davis	Sec-17 Blk-14	T&P
Roesey-Panhandle	1-Hail	Sec-119	ET
Dodson	1-Hail	Sec-98	ET
Big States	11-Webb-Russ	Sec-17 Blk-11	T&P
Merry Bros. et al.	1-Nevell	Sec-11 Blk-12	T&P
Duel-Earl	10-Mathews	Sec-32	ET
Stephens County			
Lone Star	3-Henry	Sec-53 Blk-7	T&P
Conway Bros	1-McClure	Sec-26 Blk-6	T&P
NORTH TEXAS			
Archer County			
Petroleum Prod	1-Kunkel		
Burns	2-Turveville	Sec-154	Carson
Hines	1-Jackson	Blk-119	Alridge
Omahundro	1-Roberts	Sec-100 Blk-15	ATNCL
Continental	1-Kenig et al.	Sec-15 Blk-4	KWVFL
Humble	4-A		BBB&C
Mitchell	1-Kunkel	Blk-4	McCoy
Texas-Long	1-Louster	Sec-2	BBB&C
Cullum-Thomas-Anderson	1-Lauster	Sec-3	BBB&C
Panhandle	1-Parkey	Sec-9 Blk-4	DCSL
Cooke County			
Fain-McGaha	4-Huggins		SP
Lloyd	5-Wheelock		Underwood
Simmons	3-Wheelock		Teal
Hoover et al	1-Schifflett		Garcia
Coline	2-Huggins		SP
Danciger	7-Huggins		SP
Kewana	9-Hyman		ET
Shell	3-Field-Bower		Stanley
Humble	6-Potect		Stephens
Clay County			
Mitcham et al	1-Boddy	Blk-27	Angelema Co. Sch. Ld.
Montague County			
Reynolds Drlg	1-Bryant Est.		Hardin
Wichita County			
Hammon	1-Ferguson	Sec-50	KWVFH
Wilbarger County			
Empire	B12-Waggoner	Sec-32 Blk-4	H&TC
Staley-Wynne	AA1-Waggoner	Sec-33 Blk-4	H&TC
McEnneny et al	1-Waggoner	Sec-38 Blk-3	H&TC
Harris-Watchorn	1-Waggoner	Sec-109 Blk-14	H&TC
Massie	1-Waggoner	Sec-17 Blk-14	H&TC
Stanley-Wynne	G14-Waggoner	Sec-32Blk-4	H&YC
Waggoner	M4-Waggoner	Sec-32 Blk-4	H&TC
Easter	C4-Waggoner	Sec-25 Blk-4	H&TC
Golding-Cochran	T3-Waggoner	Sec-17 Blk-4	H&TC
Loenthaul-Dyson et al.	1-Waggoner	Sec-4	SP
Waggoner	3-Waggoner	Sec-18 Blk-4	H&TC
Young County			
Estacaba et al	1-Spearman		Stoneman
Texas-Minton	1-Bailey	Sec-165	TE&L
Panhandle	5-Pitman		Mathews
Holbrook-Woods	1-Dean	Blk-19	YCSL
Campbell	1-Fee	Sec-1376	TE&L
Sharp et al	1-Edwards	Sec-71	TE&L
Roamer	1-McClatakey	Sec-171	TE&L
PANHANDLE			
Carson County			
Continental	1-Block	Sec-111 Blk-4	I&GN
Danciger	1-Block	Sec-112 Blk-4	I&GN
Empire	21-Burnett	Sec-120 Blk-J	I&GN
Gray County			
Wilson Trustee	1-Chapman	Sec-69 Blk-25	H&GN
Plains Drlg	1-Chapman	Sec-10 Blk-26	H&GN
Ray-Massie	5-Chapman	Sec-51 Blk-25	H&GN
McMan	4-Jackson	Sec-90 Blk-B-2	H&GN
Sun	4-Jackson	Sec-61 Blk-B-2	H&GN
Operators	7-Cook	Sec-30 BlkB-2	H&GN
Operators	8-Cook	Sec-30 Blk-B-2	H&GN
Texas	7-Faulkner	Sec-29 Blk-B-2	H&GN
Magnolia	2-Wright	Sec-13 Blk-3	H&GN
Danciger	1-Arnold	Sec-149 Blk-3	I&GN
Danciger	6-Beck	Sec-28 Blk-B-2	H&GN
Danciger	7-Beck	Sec-28 Blk-B-2	H&GN
Danciger	1-Humphreys	Sec-5 Blk-1	ACH&B
Champlin	3-Cook	Sec-30 Blk-B-2	H&GN
Champlin	3-McLaughlin	Sec-33 Blk-B-2	H&GN
McMay	3-Jackson	Sec-90 Blk-B-2	H&GN
Humble	4-Jackson	Sec-90 Blk-B-2	H&GN
McAutery et al	3-Morse	Sec-2 Blk-26	H&GN
Hutchinson County			
Holmes et al	1-Moore	Sec-125 Blk-4	H&GN
Reliance	2-Sanford	Sec-83 Blk-46	H&TC
Wheeler County			
Martin-Debbons	1-Close	Sec-83 Blk-23	H&GN
Shell	1-Ackley	Sec-20 Blk-24	H&GN
Murchison-Fain	1-Close	Sec-82 Blk-23	H&GN
WEST TEXAS			
Baylor County			
Ridgway	1-Turberville	Blk-22	Bryan
Douglas	1-Turberville	Sec-239	T&NO
Borden County			
Louisiana Oil & Refining Co.	1-Miller	Sec-355 Blk-97	H&TC
Howard County			
Continental	6-Chalk	Sec-140 Blk-29	W&NW
Continental	5-Chalk	Sec-140 Blk-29	W&NW
Godley	16-Hooks	Sec-140 Blk-29	W&NW
Merrick-Bristow	12-Hooks	Sec-140 Blk-29	W&NW
Witherspoon et al.	3-Abrams	Sec-3 Blk-32	T&P
Loving County			
Lockhart	3-Hubbard	Sec-83 Blk-33	H&TC
Lockhart	3-Allen	Sec-82 Blk-33	H&TC
Lockhart	4-Hubbard	Sec-83 Blk-33	H&TC
Pecos County			
Mid-Kansas & Texas	7-Smith	Sec-31Blk-194	TC
Continental	1-Yates	Sec-60 Blk-1	I&GN
Moncrief	1-Clarkson	Blk-11	H&GN
Reagan County			
Brann-Grubbs	1-McIntosh	Sec-7 Blk-L	TC
Lela	7-Laycock	Sec-20 Blk-A-8	H&GN
Ward County			
Harrison et al	1-Wristen	Sec-26 Blk-B-28	H&TC
Cranfill-Reynolds	1-Robertson	Sec-15 Blk-5	H&TC

Completions in Texas, Week Ended September 7, 1929

NORTH EAST & NORTH CENTRAL

Anderson County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Humble	4-Sou. Pine Lumber Co.	Clark		T.D. 1514	Dry
Humble	3-Todd Est.	Clark		T.D. 3890	Dry

Brown County

Estacado	2-Bull	Honeycutt		T.D. 1147	Dry
Owens et al	3-Cannon	Arenbeck		1142-1157	8
Mitcham	1-Settles	Wallis		1612-1617	3.9M
Lloyd	23-Collier	Smith	Blk-139	432-436	5
Humble	2-Hickman	Kinsey		1270-1294	350
Greene Prod	4-Davis	Townsend		1302-1317	150
French et al	1-Bekins	Chaddick		1314-1315	550

Callahan County

Eubanks-Son	6-Eubanks	Comal Co. Sch. Ld.	Blk-48	460-464	10
Warren-Hays	2-Biggerstaff	SP	Sec-310	667-687	2½M
Woodley	2-Finley	BOA	Sec-73	T. D. 515	Dry
Meade et al	1-Eastham	SP	Sec-9	T.D. 896	Dry

Comanche County

Fain	1-Poteet	D&DA	Sec-45	T.D. 3415	Dry

Concho County

Jones-Liner	1-Jones	Reh	Sec-1878	T.D. 2700	Dry

Coleman County

Broderick-Calvert	2-Weaver	Gable	Sec-7 Blk-271	T.D. 1862	Dry
Van Bebber et al	1-Pearce	ET	Sec-101	T.D. 630	Dry
Humphries Bros. et al.	1-Oliver	Oliver	Sec-62	T.D. 1941	Dry
Humphries Bros. et al.	2-Sears	Shanks	Blk-243	T.D. 973	Dry
Dozier-Humphries Bros.	1-Sears	Shanks	Blk-243	T.D. 1025	Dry
Morrison-St. John	1-Young Bros.	Greer	Blk-192	1655-1669	4M
White Eagle	5-Morris	Webber	Sec-25 Blk-722	2026-2037	615
Eastland et al	11-Morris	Webber	Sec-24 Blk-722	1996-2019	750
Eastland et al	8-Morris	Webber	Sec-13 Blk-722	1987-2015	31

Eastland County

Moore et al	1-Casey	McClennon Co. Sch. Ld.	Blk-59	3122-3614	½M
Mook Texas	10-Sibley	Van Norman	Sec-19	2905-3280	1½M
Whitesides Bros	1-Murrell	H&TC	Sec-29 Blk-2	1318-1330	1½M
Larson	1-Ramsower	H&TC	Sec-38 Blk-4	3720-3823	500
Ark. Fuel	8-Lyerla	Ussury		T.D. 1442	Dry

Erath County

Cranfill-Reynolds-Amerada	1-Gibson	Bishop		3313-3400	2¼M

Falls County

Grover et al	1-Allen	Zarza		T.D. 1140	Dry

Grimes County

Deering et al	1-Kelly	Berryman		T.D. 3006	Dry

Guadalupe County

Texas	1-Anderson	Darst		T.D. 2631	Dry
Penn	1-Manford	Hodges		T.D. 2420	Dry
Texas	1-Wilson	Darst		T.D. 2610	52 (1 Hr.)

Haskell County

Evans et al	1-Reynolds Cattle Co.			T.D. 1819	Dry

Hill County

Fentress et al	1-Reynolds	Sullivan		T.D. 830	Dry
Harper-Laston	2-Jones	Graves		T.D. 1255	Dry
McElmurry-Keitt	2-Coates Est.	McDonald		T.D. 1230	Dry
Thomas-Bland	1-Clark	Patton		T.D. 830	Dry
Harper-Laston	1-Jones	Graves		699-700	23

Jack County

F. H. E. Oil Co.	2-Leffel	Hughson		T.D. 2673	Dry

Jones County

Phillips	2-Low	T&P	Sec-15 Blk-19	T.D. 3009	Dry
Texas	4-Camp	T&P	Sec-13 Blk-19	2488-2499	100
Cosden et al	1-Bickley	T&P	Sec-50 Blk-18	2497-2512	28

Runnels County

Independent	1-Rollurtz	Salinner	Blk-20½	T.D. 4317	Dry

Shackleford County

Combest-Atkins	1-Mathews	ET	Sec-2	T.D. 666	Dry
James	1-Newell	ET	Sec-87	T.D. 1538	Dry
Hughes	3-Hill	LAL	Sec-2	T.D. 718	Dry
Shecker et al	4-Mathews	ET	Sec-58	848-849	15
Sedgwick	1-Morris et al.	ET	Sec-200	1600-1601	35
Roeser-Pendleton	13A88-Cook	ET	Sec-88	1416-1418	150 & 7M
Roeser-Pendleton	11A88-Cook	ET	Sec-88	1422-1424	100 & 8M
Roeser-Pendleton	10A88-Cook	ET	Sec-88	1396-1398	60 & 18M
Roeser-Pendleton	45A61-Cook	ET	Sec-61	1213-1232	35
Manning et al	4-Reynolds	T&P	Sec-11 Blk-11	919-920	5
Big States	10-Russ-Webb	T&P	Sec-17 Blk-11	779-795	40

NORTH TEXAS

Archer County

Moran Drlg. et al	3-Bloodworth	Cartwright		1223-1228	18
Humble et al	4-Logan	Taylor	Blk-25	1141-1149	18
Continental	2-Richardson	McCoy	Blk-11	1182-1186	30
Burns	6-Wilson	ATCNL	Sec-114	1427-1436	30
Josey et al	6-Prideaux	Dorsey	Blk-24	652-663	5
Texas-Burns	1-Ward	Tomlinson		T.D. 1265	Dry
King-Carlett-White	1-Wilson	Geraldine	Blk-975	T.D. 1550	Dry
Lomax Jr. et al	1-Wilson	H&TC	Sec-1 Blk-9	T.D. 1634	Dry

Clay County

Franklin	1-Wolfe	BBB&C	Sec-7	T.D. 3135	Dry

Cooke County

Danciger	2-Huggins	SP		1163-1174	88 (6 Hrs.)
Danciger	4-Huggins	SP		1128-1133	240
Fain-McGaha	2-Huggins	SP		1153-1163	100
Fain-McGaha	3-Huggins	SP		1149-1153	75
Shell	1-Field et al.	Stanley		1192-1197	132

Grayson County

Sherman	2-Dalton	Ingram		902-906	1½M
Schrivner et al	1-Easton	Stamps		T.D. 150	Dry

Montague County

Gaston	1-Gaston	Bake		T.D. 2004	Dry

Wichita County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Texas	362-Waggoner	H&TB	Sec-13	T.D. 2251	Dry
Bradstreet	1-Love	Kennard	Blk-129	T.D. 1906	Dry
Reno	4-Roller Est.	Maverick	Blk-8	1784-1794	11
Hines-Humble	4-Waggoner	Willis		1323-1334	15

Wilbarger County

Grayback Dev	11-Waggoner	MEP&P	Sec-40	1864-1876	85
Fain-McGaha	W16-Waggoner	H&TC	Sec-32 Blk-4	1859-1862	110
Empire	B14-Waggoner	H&TC	Sec-32 Blk-4	2403-2440	30
Empire	A8-Waggoner	H&TC	Sec-32 Blk-4	2304-3305	330
Waggoner	M3-Waggoner	H&TC	Sec-32 Blk-4	1871-1873	125
Waggoner	M2-Waggoner	H&TC	Sec-32 Blk-4	2292-2312	120
Waggoner	M1-Waggoner	H&TC	Sec-32 Blk-4	2414-2413	72
Staley-Wynne	G11-Waggoner	H&TC	Sec-32 Blk-4	2290-2299	136
Staley-Wynne	E3-Waggoner	H&TC	Sec-25 Blk-4	1867-1880	210
Melat	A9-Waggoner	H&TC	Sec-10 Blk-4	1986-1998	105
Lewis Prod	B5-Waggoner	H&TC	Sec-17 Blk-4	2395-2413	90
Lewi Prod	B4-Waggoner	H&TC	Sec-17 Blk-4	2399-2419	98
Empire	A6-Waggoner	H&TC	Sec-32 Blk-4	1830-1850	144
Consolidated	O9-Waggoner	MEP&P	Sec-40	1854-1875	75
Consolidated	O7-Waggoner	MEP&P	Sec-40	1864-1881	97
Consolidated	O6-Waggoner	MEP&P	Sec-40	1857-1879	195
Apple-Brandenberry	2-Waggoner	H&TC	Sec-32 Blk-4	2322-2435	42
Knight	B1-Waggoner	H&TC	Sec-22 Blk-4	T.D. 1931	Dry
Grayback Dev	10-Waggoner	MEP&P	Sec-40	T.D. 1906	Dry
Grayback Dev	B1-Waggoner	H&TC	Sec-26 Blk-4	T.D. 2455	Dry
Staley-Wynne	B5-Waggoner	H&TC	Sec-25 Blk-4	T.D. 1958	Dry

Young County

Hawkins	4-Owens	BBB&C		T.D. 754	Dry
Richardson-Massie	1-Prideaux	Rhodes		T.D. 907	Dry
Bradstreet et al	2-Richardson	Mauphin		T.D. 791	Dry
Brihill-Bradstreet	1-Matthews	Rohus		T.D. 749	Dry
Panhandle	1-Roach	BBB&C		T.D. 800	Dry
Richardson-Dresser	2-Dean	YCSL	Blk-19	T.D. 688	Dry
Stafford	2-Brown	TE&L	Sec-290	T.D. 584	Dry
United Royalty et al.	4-Carpenter	Sergeant		T.D. 660	Dry
Carpenter	7-Barrett	Sergeant		570-618	8

PANHANDLE

Carson County

Skelly	17-Schaeffer	I&GN	Sec-198 Blk-3	3218-3228	400
Tmms	2-Jordan et al.	I&GN	Sec-113 Blk-4	3131-3132	8M
Texas	2-Quinn	I&GN	Sec-7 Blk-9	3080-3090	123
Midwest Explor	3-Cooper	I&GN	Sec-5 Blk-9	3102-3121	380
Holmes et al	2-Quinn	I&GN	Sec-7 Blk-9	3075-3092	180
Empire	18-Burnett Est.	I&GN	Sec-96 Blk-5	2410-2480	16M

Gray County

Texas	12-Saunders	Eustice	Sec-1	T.D. 2728	8M
McMan	3-Palmer	H&GN	Sec-31 Blk-B-2	2895-2935	1080
Lyon et al	1-Morse	H&GN	Sec-2 Blk-26	2614-2638	168
Gulf Prod	2-Saunders	ACH&B	Sec-3 Blk-1	2596-2616	40
Gulf Prod	7-Jackson	H&GN	Sec-62 Blk-B-2	2917-2968	237
Gulf Prod	6-Jackson	H&GN	Sec-62 Blk-B-2	2845-2946	1400
Dunlop	2-Morse	H&GN	Sec-2 Blk-26	2476-2575	180
Texas	11-Saunders	B&B	Sec-3	2730-2780	375
Texas	4-Patton	H&GN	Sec-61 Blk-B-2	2840-2980	50
Texas	2-McLarty	Rose		2665-2770	234
Texas	3-Patton	H&GN	Sec-61 Blk-B-2	2940-2973	350
Texas	13-Bowers	H&GN	Sec-89 Blk-B-2	2990-2993	12000
Texas	8-Bowers	H&GN	Sec-89 Blk-B-2	3075-3080	3200
Operators	4-Cook	H&GN	Sec-30 Blk-B-2	2840-2842	7600
Continental	5-Finley et al.	H&GN	Sec-32 Blk-B-2	2890-2911	370
Gulf Prod	5-Jackson	H&GN	Sec-62 Blk-B-2	3095-3133	250
Gulf Prod	11-Bowers	H&GN	Sec-89 Blk-B-2	3066-3110	600
Gulf Prod	10-Bowers	H&GN	Sec-89 Blk-B-2	2998-3070	250
Gulf Prod	9-Bowers	H&GN	Sec-89 Blk-B-2	2995-3001	776

Hartley County

Amarillo	9-Bivins	CS&S	Sec-6 Blk-21	3785-3145	11M

Hutchinson County

Phillips	4-Ford et al.	A&B	Sec-28 Blk-Y	2848-2858	115
Skelly	7-Mattenburg	Whittenburg Blk-Y	Sec-22	2918-2921	185
Phillips	4-Chap et al.	H&TC	Sec-78 Blk-46	2950-2970	207
Phillips	2-Trigg	Trigg	Sec-2 Blk-O-B	2938-2944	100

Wheeler County

Johnston et al	1-West	H&GN	Sec-30 Blk-17	T.D. 1871	Dry

WEST TEXAS

Crane County

Warner-Quinlan	5-Davis	Univ.	Sec-39 Blk-30	2879-3003	260
Warner-Quinlan	4-Davis	Univ.	Sec-39 Blk-30	2847-2980	288
Humble	1-Univ.	Univ.	Sec-34 Blk-30	2970-3020	132

Fisher County

Cranfill-Reynolds	1-Flannigan	BBB&C	Sec-200 Blk-1	T.D. 3119	300
Texas-Phillips	1-Hall	T&P	Sec-6 Blk-20	T.D. 3600	Dry
White Eagle	1-Hughes	Cosby		T.D. 2566	Dry
Gillman-McMurray	1-Cleveland	H&TC	Sec-116 Blk-2	T.D. 3815	Dry

Howard County

Fuhrman	1-Read	T&P	Sec-41 Blk-32	T.D. 3275	Dry
Gibson-Johnson	1-Read	T&P	Sec-47 Blk-30	T.D. 2955	Dry
Green	3-Clay	W&NW	Sec-127 Blk-29	2590-2598	75
Owen-Sloan	13-Roberts	W&NW	Sec-136 Blk-29	1293-1374	85
Moody	21-Roberts	W&NW	Sec-137 Blk-29	1305-1398	100
Moody	17-Roberts	W&NW	Sec-137 Blk-29	1316-1410	45
Cranfill-Reynolds	2-Abrams	T&P	Sec-3 Blk-32	1427-1438	126
Pure	1-Scrivner	T&P	Sec-4 Blk-32	2298-2302	65

Irion County

Baker-Hodges	1-Tankersley	GC&SF	Sec-23	T.D. 1372	Dry

Pecos County

Shell	11-Smith	TC	Sec-27 Blk-194	1470-1542	28 (1 Hr.)
McMan	4-Richardson et al.	TC	Sec-108	1308-1374	9 (1 Hr.)
Phillips	2-Monroe	TC	Sec-39 Blk-194	1345-1385	30
Taylor-Link	2-Univ.	Univ.	Sec-31 Blk-16	1616-1631	71 (12 Hrs.)

Winkler County

Magnolia	2-Scarborough	PSL	Sec-1 Blk-C-22	2850-3077	147
Gulf Prod	3-Hendricks	PSL	Sec-44 Blk-26	2830-2874	735
Southern Crude	T89L1-Hendricks	PSL	Sec-15 Blk-B-12	2760-2947	527

Weighing and Counterbalancing Aid In Efficient Well Pumping

GALVESTON, Sept. 5

WEIGHING and counterbalancing of oil wells, plus the evaluation of sucker rod service in pumping practice, have resulted in the increasing of operating efficiency by the Humble Oil & Refining Co., Houston.

Results obtained from experiments made to determine causes of sucker rod trouble, the effects of counterbalancing and the overall power efficiency of pumping equipment are contained in a paper prepared by W. C. Shutts, petroleum engineer, and B. L. Moore, electrical engineer, for the Galveston district meeting, Sept. 5-6, of the American Petroleum Institute Division of Development and Production Engineering.

The weighing of wells played an important part in the analysis. A recording dynamometer described in the paper was used to obtain indicator cards showing the weight on the polished rod and its travel. Such cards, together with power readings taken at the motor made it possible to determine the most efficient pumping motion, the effective length of plunger stroke, correct weight of counterbalance, effects of counterbalancing and the vibratory stresses that are set up in a string of rods by irregular pumping motion.

From such information, Messrs. Shutts and Moore pointed out, increased operating efficiency can be obtained by making change in methods of operation or size and type of equipment.

A recording dynamometer was constructed as illustrated in the accompanying Fig. 1. It was designed by C. V. Temple, West Texas division petroleum engineer of the Humble.

The dynamometer is of the hydraulic type and requires no special beam hanger or disturbance of the regulation well hook-up. To install it, the dynamometer is slipped down over the polished rod until its rests on the regular polished rod carrier. A polished rod clamp is then installed on the top of the instrument and the full weight of the rods is allowed to rest on the dynamometer.

Weight of the rods is carried on four pins which act on a diaphragm, imparting the load to the fluid above. Pressure of the fluid is transmitted by means of a flexible hose to the recording pressure gauge.

The major part of the recording apparatus is a 12-inch static recording case with pressure element, two light wood pulleys to revolve the chart, and a light tripod, made of one-half inch pipe, that can be dismantled easily.

A pressure recording chart is used for taking indicator cards and the revolving mechanism is so constructed that any travel of the polished rod can be read direct from the card in inches. The pressure of each part of pumping stroke is recorded and a circular card is obtained.

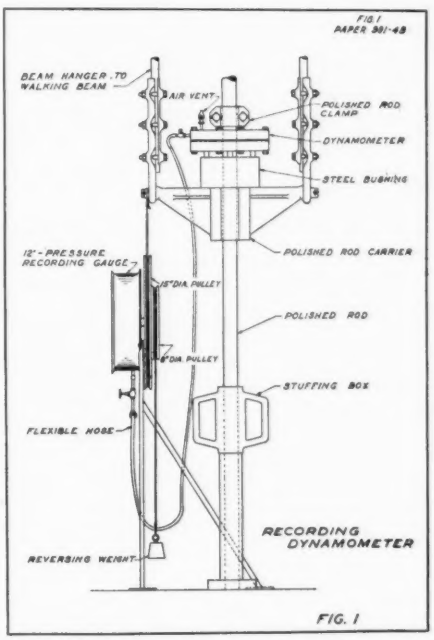


Fig. 1—Diagram of Recording Dynamometer

The circular card can be replotted on cross-section paper for office files and study. The indicator chart is actuated by the movement of the polished rod on the up-stroke and a reversing weight on the down-stroke.

When so desired, the chart can be set to retrace itself for several strokes and an average card for these several strokes is obtained. The working cross-sectional area of the dynamometer is such that for each pound pressure registered on the indicator chart a load of 25.8 pounds is acting on the dynamometer.

Messrs. Shutt and Moore found the information obtained with the described instrument has been indispensable in analyzing existing pumping conditions and arriving at the conclusions given in their paper.

Due to a large amount of sucker rod trouble in comparatively easy wells, a total of 40 had been weighed under various conditions. The wells varied from 2050 to 2700 feet in depth. Ten of the wells weighed are equipped with standard pumping rigs and grasshopper counterbalances. The remainder of the wells weighed are equipped with reduction gear units with rotary or grasshopper type counterbalances.

Normal pumping speeds vary from 17 to 31 strokes a minute. Tests were made at pumping speeds ranging from 14 to 34 strokes a minute. Gas engines and electric motors are used as prime movers. Indicator cards have been plotted for representative wells to show existing pumping conditions as determined by the dynamometer.

Messrs. Shutt and Moore found the present system of evaluating sucker rod service on the number of days run, or barrels of fluid lifted, had proved inadequate in that in a number of cases rods operating in supposedly easy wells had given very poor service while the same make of rods operating is supposedly hard wells gave no trouble.

They found rods had been condemned and junked for failure to give satisfactory service in wells that were pumping little fluid and thought to be easy wells; but on weighing wells the rods were found to be heavily stressed and doing a great deal of work.

Through use of the dynamometer, a method was developed for actually measuring the work done and evaluating the sucker rod service. The life of a string of rods, they said, may be influenced by many factors and to calculate with complete accuracy the exact amount of work performed by a string of rods is an almost impossible task.

It was found, by weighing wells periodically, that the amount of work performed by the rods is fairly uniform as long as the operating conditions—such as, length of stroke, strokes per minute, and type and size of equipment—remain constant.

By weighing wells periodically, a constant check may be kept of the pumping motion and the sucker rod service obtained by the following described formula:

$$\text{Ton Mile Service} = \frac{(UL + DL)\ N \times L \times 1440 \times S}{5280 \times 2000}$$

(Formula 1)

Where UL = Up stroke load.
DL = Down stroke load.
N = Number strokes per minute.
L = Length of stroke (feet).
S = Days service.

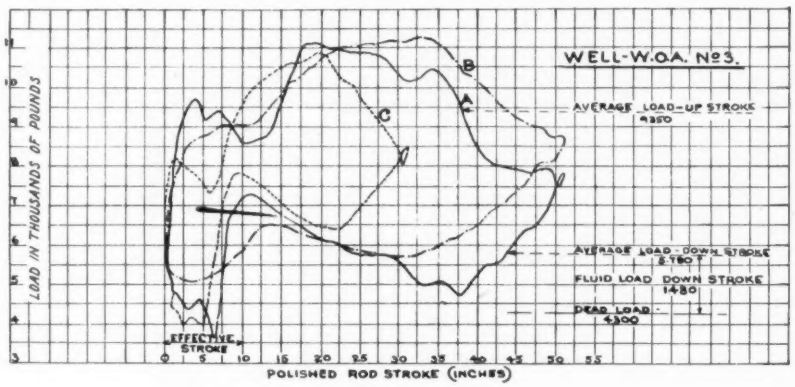


FIG. 2

EFFECT OF POUNDING FLUID

	LENGTH STROKE	STROKES PER MIN.	H-P-AT MOTOR	H.P. AT POL. ROD	ROD T.M. SERVICE PER DAY	REMARKS
CARD A	51"	24.1	19.1	11.1	211	POUNDING FLUID 10" FROM BOTTOM
CARD B	51"	24.1		11.2	222	WELL RESTED 1 HOUR
CARD C	31"	25	12.9	5.2	139	PUMPED DOWN ON 31" STROKE

REDUCTION GEAR UNIT-ROTARY COUNTERBALANCE - PUMPING DEPTH-2625-FT. ¾" RODS. APPROXIMATELY 200-BBLS. FLUID PER DAY

PAPER 901-48 FIG. 2

Under the head of causes of sucker rod failure the authors had found the well illustrated in Fig. 2 was giving considerable rod trouble, a failure taking place every four or five days, either in the body of the rod or in the joint. The well was pumping with a 51-inch stroke.

Indicator cards showed the plunger to be hitting fluid 10 inches from bottom. (Note the vibratory stresses that are set up in the string of rods when pounding fluid.) The well was shut down for an hour to build up a fluid head. The plunger hit fluid higher up but pumped down to 10 inches from bottom in a short time.

Various experiments were tried in lowering and raising the plunger in the barrel, but in each case approximately 10 inches of fluid was lifted. The stroke was reduced to 31 inches, with the plunger hitting fluid at the same position. A large decrease in power consumption, with a corresponding decrease in horsepower at the polished rod and work performed by the sucker rods, was effected, with no loss in effective stroke or production. The decrease in power is not in proportion to the decrease in load at the polished rod, and a lower overall power efficiency is obtained at the lighter loads.

Previous to changing the stroke at this well there had been 14 rod failures in 72 days, or one failure every five days. In 88 days' service since weighing the well, there have been six failures, or one failure every 15 days. This well is pumping at 25 strokes per minute with a constant speed motor.

It is believed that slowing the pumping motion down to 18 strokes per minute, and lengthening the stroke to take care of the production, should give a very smooth pumping motion and practically eliminate the sucker rod failures.

Several of the heaviest wells weighed, and those causing the most rod failures, are wells making from 100 barrels to 200 barrels of fluid and pounding fluid anywhere from 7 inches to 20 inches from bottom. By weighing these wells, the exact length of effective stroke was determined and the pumping motion regulated accordingly. Sucker rod failures have been reduced to one or two a month where, previous to weighing, a failure was occurring every few days. Power consumption at the motor has been reduced 25 to 50 per cent.

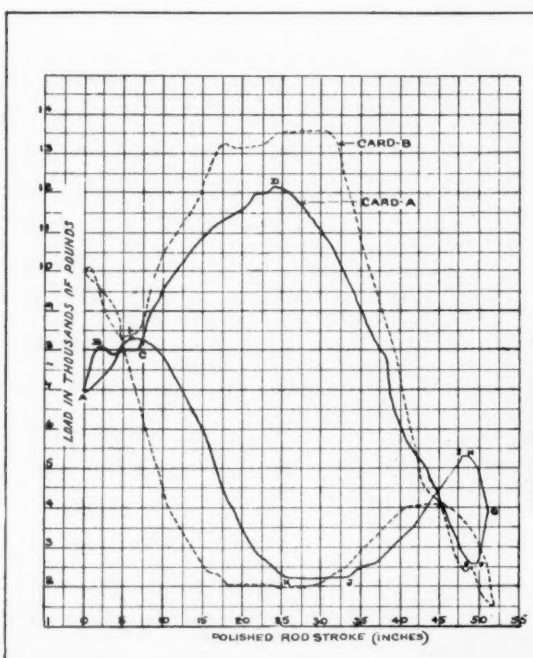
The accompanying Fig. 3, presented as a part of the paper, shows cards taken on a well operated at comparatively high pumping speeds. Card "A" was taken at normal pumping speed of 31 strokes a minute and card "B" was taken at 34 strokes a minute. The high maximum and minimum loads, with whip or jerk at each end of the stroke, will be noted.

From a study of indicator cards taken and curves plotted on plunger travel as against polished rod travel, an analysis of Card "A," Fig. 3, was as follows: The rods are picked up at the bottom of the stroke at point "A." From point "A" to point "B" the polished rod travels upward with a sharp increase in load, absorbing rod stretch and accelerating the fluid load. From point "B" to point "C" the plunger travel is approximately the same as the polished rod travel.

The high peak load occurring at point "D" is resultant impact load and accelerated fluid column load. During this period the plunger travel is a great deal less than the polished rod travel, due to rod stretch. From point "D" to point "E" a deceleration of the rods takes place with a decrease in load.

Due to this decrease in load the rods are contracting and the plunger travels upward with a much higher velocity than the polished rod. At point "E" the plunger has decelerated to the same velocity as the polished rod and the two travel together through a fraction of the stroke.

From point "F" through point "G," at the top of the polished rod stroke to point "H" the plunger is lagging behind the polished rod, resulting in



WELL WMS-3.

FIG. 3.

EFFECT OF HIGH PUMPING SPEED

CARD.	LENGTH OF STROKE	STROKES PER MIN.	H-P AT MOTOR	H-P. AT POL. ROD.	ROD T.M.PER DAY	REMARKS
A	51	31	20.1	15.9	234	NORMAL PUMPING.
B	52	34	30.9	25.6	272	INCREASED SPEED

REDUCTION GEAR UNIT
ROTARY COUNTER-BALANCE
PUMPING DEPTH 2625 FT.
2⅛" TUBING - ¾" RODS.

PAPER 901-48 FIG. 3

INCREASED PRODUCTION

Makes Possible a Substantial

REDUCTION IN PRICES

of

HUGHES ROCK BIT CONES

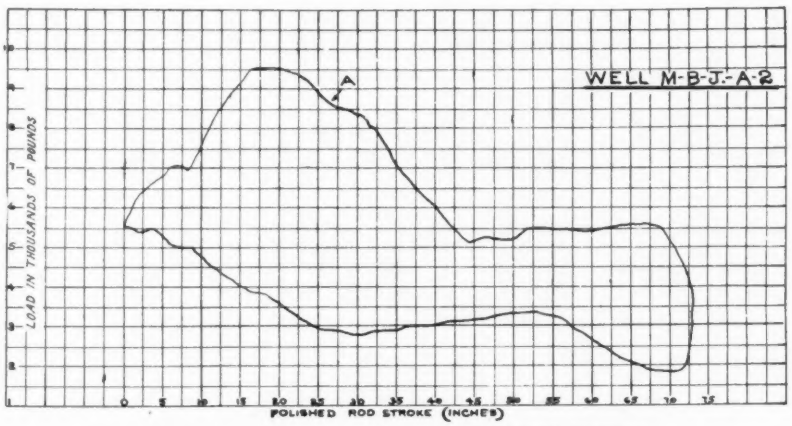
In keeping with a promise made to the Industry less than a year ago, the Hughes Tool Company has announced a substantial reduction in the price of Hughes Cones.

Sold by Supply Stores Everywhere

This price reduction is made possible by the great demand for Hughes Cones throughout the Rotary Fields of the world. To meet this demand, the manufacturing facilities of Hughes Tool Company have been increased almost 25% during the present year.

Sold by Supply Stores Everywhere

The service cycle back of Hughes Tools includes territorial plants at Los Angeles and Oklahoma City, with an export office at New York City.



WELL WITH COMPARATIVELY SMOOTH PUMPING MOTION

CARD	LENGTH STROKE	STROKES PER MIN.	H.P. AT MOTOR	H.P. AT POL. ROD	ROD T.M. SERVICE % DAY	REMARKS
A	73"	21		12.8	102	NO ROD FAILURES

REDUCTION GEAR UNIT - ROTARY COUNTERBALANCE
PUMPING DEPTH 8650 FT. - 2¼" TUBING - ¾" RODS
APPROXIMATELY 800 BBLS. FLUID PER DAY

FIG. 4.

PAPER 501-48 FIG. 4

an increase in load. At point "F" the plunger reaches its maximum upward travel slightly ahead of the polished rod. From point "F" to point "G" the plunger travels downward slightly while the polished rod is still traveling upward.

The increased load from point "G" to point "H" causes the rods to stretch at the same time the polished rod is traveling downward and the movement of the plunger is greater than the polished rod. From point "H" to point "K" a downward acceleration of the rods takes place.

At point "H" the polished rod velocity becomes equal to the plunger velocity and the travel of the two is equal. From point "I" to point "J" the rods are accelerated downward with a decreasing load. The rods contract and the plunger travel is less than the polished rod travel. At point "J" the polished rod starts decelerating and the velocity and travel of the plunger becomes equal to that of the polished rod.

From point "K" to point "L" the rods are decelerated, causing an increase in load. This increase in load causes the rods to stretch on the down stroke, which, added to the polished rod travel, causes a greater plunger than polished rod movement. At point "L" the plunger velocity becomes less than the polished rod velocity and a decrease in load results to point "A" at the bottom of the stroke.

The indicator card on this well indicates a much greater plunger movement than polished rod movement. A study of all indicator cards obtained suggests the possibility of the existence of a critical speed at which a pumping well might be operated and a more efficient plunger movement obtained than at either an immediately higher or lower speed.

Cards taken at slower pumping speeds show a decreased maximum load and an increased minimum load, with peak loads occurring at about the same position in the stroke. Less differential in rod stress will increase sucker rod life and more efficient counterbalancing can be obtained.

The cards show that, with a pumping stroke ranging from 52 inches to 72 inches, the peak load occurs at approximately 45 degrees to 80 degrees of the crank travel, on the upstroke of the rods, but as this stroke is decreased to 24 or 32 inches at the same pumping speed, the peak load occurs near the top of the stroke.

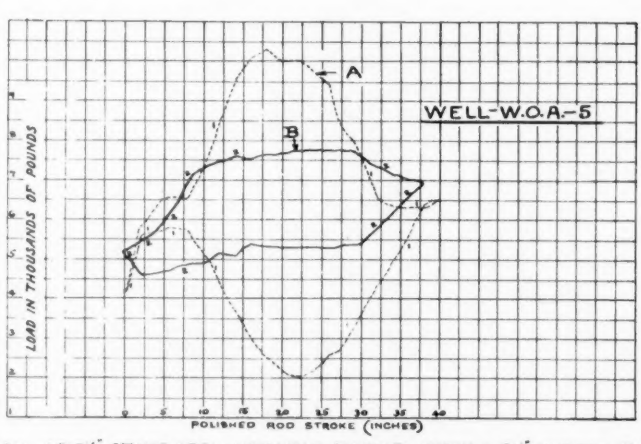
With the peak load occurring near the top of the stroke, considerable plunger movement is lost due to stretch in the rods and is not recovered before the rods start their downward travel. On this basis a more efficient pumping motion should be obtained by a longer stroke and slower pumping speed, hence, this would depend to some extent on the pumping depth of the well, as in the deeper wells the impact and accelerated loads would occur later in the pumping stroke.

Fig. 4 shows a card of a well pumping on a long stroke and handling considerable fluid. This well has a very efficient pumping motion and has given no rod trouble.

Fig. 5 shows a comparison between a 2½-inch standard working barrel and a 2½-inch insert pump. Very little rod trouble has been experienced at this well since installation of the insert pump, in comparison wth previous rod failures. As the cross-sectional area of the insert pump plunger is approximately 74 per cent of that of the standard barrel, a lighter running pump is to be expected.

The reduction in down time, due to an easier running pump, may offset any disadvantage of the smaller capacity. Similar conditions have been obtained by changing from 2½-inch to 2-inch tubing and working barrel.

Counterbalancing was described by the authors as usually considered merely from the standpoint of power saving. Experiments conducted on several pumping wells had, however, disclosed the fact that changes in counterbalance weights will not only reduce the load on prime movers but



COMPARISON OF 2½" STANDARD WORKING BARREL, WITH A 2½" INSERT PUMP

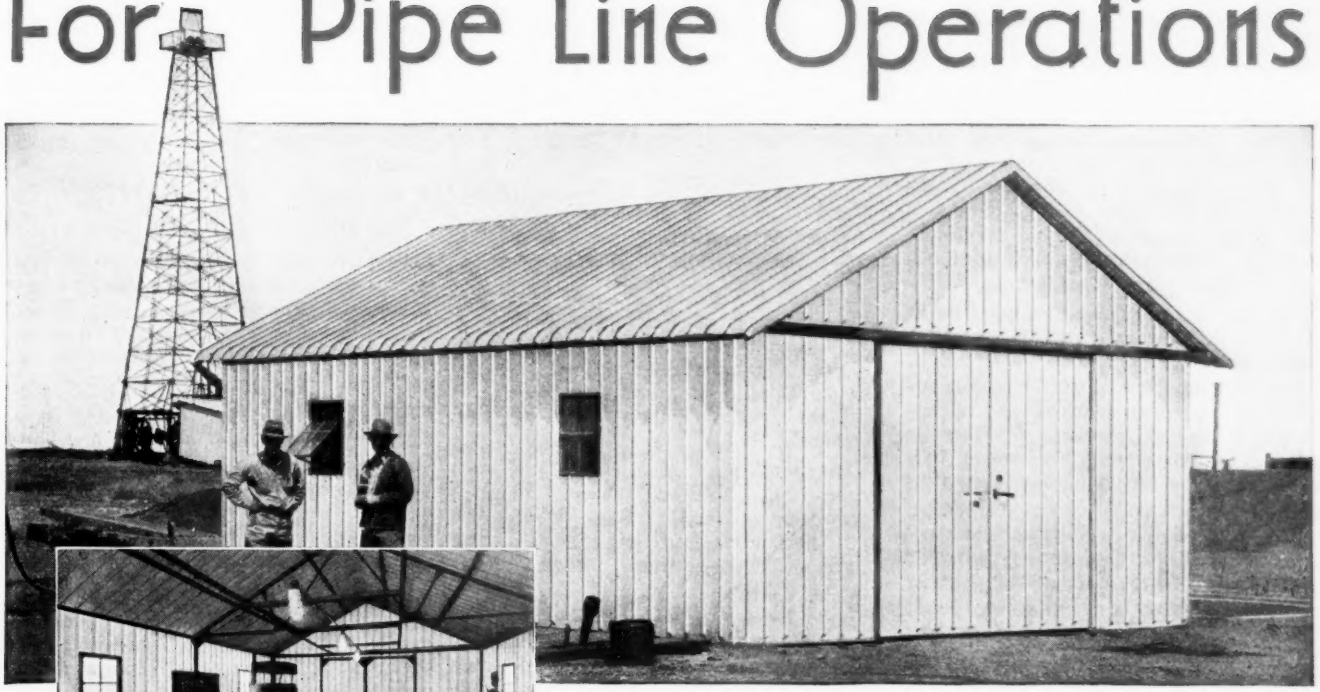
CARD A	2½" STANDARD BARREL - POL. ROD H.P. = 7.76
CARD B	2½" INSERT PUMP - POL. ROD H.P. = 3.67

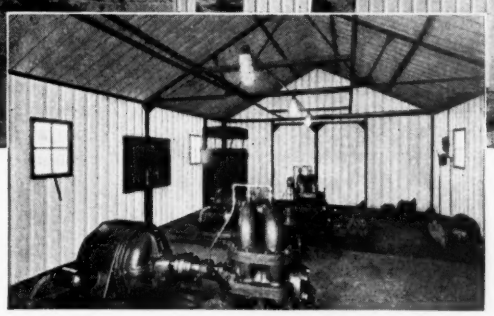
REDUCTION GEAR UNIT - ROTARY COUNTERBALANCE
PUMPING DEPTH 2550 FT. - 2½" TUBING - ¾" RODS
APPROXIMATELY 255 BBLS. FLUID PER DAY - 21 STROKES PER M.

FIG. 5

PAPER 501-48 FIG. 5

For Pipe Line Operations





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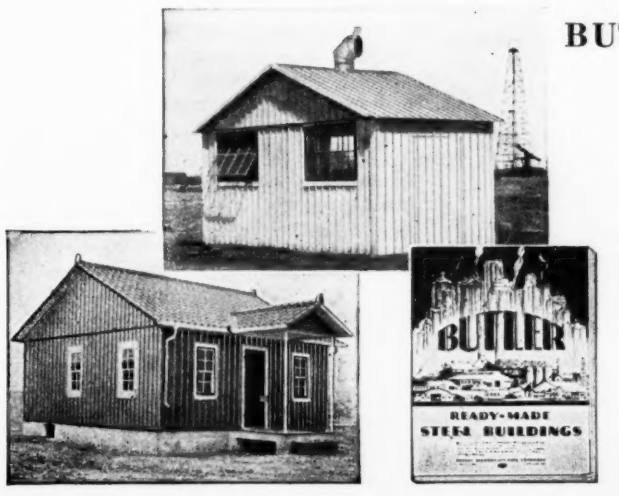

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will also smooth out the rod motion, reduce impact loads and affect the plunger movement.

A formula developed by the authors had shown, they said, that the most efficient counterbalance for power consumption is equal to the weight of the rods, plus one half of the fluid load, less one half of the weight of the fluid displaced by the rods. By weighing a well the correct counterbalance can be accurately determined, as all factors affecting the rod loading are taken into consideration.

No comparative tests had been made as between rotary and beam type counterbalances on the same well. While the authors describe their information on this comparison as incomplete present studies of all wells weighed had indicated the rotary balance produces a smoother pumping motion.

They said the grasshopper counterbalance apparently produces sharper peak loads than the rotary type. On long strokes and fast pumping speeds they had found the beam balance has particular disadvantages, due to high speed reciprocation of the balance weight, producing certain undesirable inertia effects. To reduce such effect, extremely heavy weights are hung between the pitman and sampson post.

One of the disadvantages of the rotary type balance was found to be that the effective balance decreases as the length of stroke increases and in some instances it is impossible to install sufficient balance for the most efficient operation of heavy wells.

Overall above-ground power efficiency was determined in the tests made by measuring the electrical input to the motor with a watt-hour meter and the power delivered to the rods with a dynamometer. This efficiency varies from 12 to 85 per cent, depending on the type of drive, the counterbalancing and the load handled.

The investigators found the decrease in power is not in proportion to the decrease in load at the polished rod and higher power efficiencies are obtained at increased pumping speeds, heavier loads and more efficient counterbalancing.

Shell to Recement Deepest Well

LOS ANGELES, Sept. 6.—According to latest reports Shell Oil Co.'s Nesa No. 11, the deepest drilling well in the world, located on the Signal Hill area of the Long Beach field is wet and will be recemented for another test.

The well was placed on the pump, with bottom at 9280 feet but failed to show any trace of oil. Approximately 480 barrels of fresh water was pumped from the hole per day, for several days without obtaining any indications that the well might ultimately become a commercial producer.

Trinity Bedding Found High In De Soto Parish Test

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, Sept. 5

AHITHERTO unsuspected geological condition found in De Soto parish has brought that part of North Louisiana to the forefront as one of the most likely areas for oil production in the Trinity beds of the southwest.

The test well of A. A. Fair and others, in 1-12-12, found Trinity formation at 2569 feet after the drill had gone out of the Brownstown marl somewhere between 2525 and 2569 feet.

It had been previously known that the productive Woodbine horizon is absent in some parts of the general Shreveport territory, or that only a thin remnant of it remains, but the absence of the Washita and Fredericksburg formations of Lower Cretaceous age was an entire surprise to operators watching the Fair test. Where the Washita and Fredericksburg formations are present in their entirety the normal thickness is about 1200 to 1300 feet.

Seven miles northwest of the Fair test, in 6-13-13, producing wells of R. O. Roy and others, of Shreveport, yield gas from the Woodbine at the 2800-foot level.

With surface elevations virtually constant in the two areas, observers have pointed out that in the event the full thickness of Washita and Fredericksburg bedding exists below the Woodbine in the Roy wells then adjustment of total depth figures would indicate the Trinity formation is more than 1400 feet higher in the Fair test than in the others mentioned.

In any event, the presence of the Woodbine at 2800 feet in the Roy wells and the finding of the Trinity at a lesser depth in the Fair test indicates a tremendous uplift of the last mentioned beds. Provisional identification of the Trinity in the Fair test indicates this formation is found there at its highest known point in northwest Louisiana, except at Bellevue, Bossier parish, and the possible exception of a part of the Pine Island field.

Because of the conditions mentioned, North Louisiana operators are looking upon the Fair area of De Soto parish as having the best chance of oil production in Trinity beds of any in either North Louisiana or South Arkansas.

The gas now showing in the Fair well is estimated at approximately 5,000,000 cubic feet daily. Cement did not set properly in the well and no actual test of its capacity was possible. When the east gave way the hole bridged 300 feet off bottom and a recementing job became necessary.

When the gas first appeared it blew for about five hours without lowering the pressure below 145 pounds. Water kept increasing from around the casing and eventually killed the flow after the operators had been able to get circulation from outside of the casing.

Before going "dead" the well made a rainbow showing of oil, enough to get an idea of its gravity, which approximates 45 degrees. The reservoir pressure of the well was estimated at 900 pounds.

Reeser Predicts Early Overproduction End

NEW YORK, Sept. 6.—The problem of overproduction will be solved within a year, E. B. Reeser, president of the Barnsdall Corp. and the American Petroleum Institute, said this week in a statement to New York newspapers. This optimism is held by Mr. Reeser because "there is greater harmony and willingness to cooperate today between the large and small units of the petroleum industry than at any previous time in the history of the industry.

"The well-integrated units of the oil industry are, almost without exception, showing satisfactory and in some cases exceptional earnings and net income statements," said Mr. Reeser. "Gasoline and petroleum products' consumption in the United States has outstripped even the vastly increased production. The ratio of increase in the use of gasoline and products is relatively at the rate of two for one, compared with the current increase in output.

"California is the key to the present situation, and California's output will be radically cut through enforcement of that state's gas conservation law, which goes into effect Aug. 31.

"For the first time there is positive assurance that the immense natural resources of petroleum, which the United States possesses to a greater extent than any other country in the world, will be conserved for the use of generations of our people beyond the power of the present generation to estimate."

Salt Water Disposal Problems Handled by Oil Companies

Staff Special
GALVESTON, Sept. 5

DISPOSAL of brine in the oil fields of Texas has become a problem of concern as a result of statutes governing stream and underground water polution.

Four disposal methods used were described by S. W. Oberg, chief engineer of Humble Oil & Refining Co., Houston, in a paper before the Texas-Louisiana-Arkansas district meeting of the A.P.I. Division of Development and Production Engineering at Galveston, Sept. 5.

The methods are (1)-cavity wells; (2)-direct run-off to streams and the sea; (3)-seepage into the ground and evaporation; and (4)-storage in dry periods and run-off to streams during floods.

Cavity wells were described as successfully used at Liberty, Dayton, Hull and Damon Mound. Usual practice is to collect the water in earthen pits and pump it to cavity wells on top of the salt dome structures.

A similar method has been recently applied successfully in Winkler county, West Texas, where wells are drilled to the top of the Barstow sandstone, at which point casing is cemented to prevent pollution of upper fresh water sands.

Some of the Winkler wells are reported to take as high as 40,000 barrels daily, with pressures ranging from zero to 75 pounds. Depths of the wells are from 305 to 1600 feet.

Geographical locations of the Goose Creek and West Columbia oil fields permit direct run-off to the Gulf of Mexico. Run-off to rivers is used in the Powell, Mexia and Luling interior fields. A similar condition applies for the present at Salt Flat, in the Luling district.

Describing a salt water company organized in the Powell field, and methods pursued elsewhere, Mr. Oberg said:

"Rights-of-way were purchased (at Powell) across private lands and down Chambers and Richland Creeks to the Trinity river for disposal of salt water. Several law suits have been brought against the company, claiming damage to lands adjoining creeks, which so far have been successfully defended.

"In the Luling field, water is ditched to several creeks and flows down these to the San Marcos river. The same method is in use in the Salt Flat field, but steps are being taken to store the salt water in dry periods and allow it to escape in high water periods in order to reduce the salinity in the San Marcos and Guadalupe rivers.

"At Breckenridge (general Ranger territory) most of the salt water escapes into the Gonzales creek, then down to the Clear Fork of the Brazos river. Gonzales is generally recognized as a salt water creek through the Breckenridge field.

"At Vernon, the Wilbarger Salt Water Co. was formed to pump water to the Pease river, a brackish water stream. Water is delivered to a gathering pit at the company's pump station by the various operators, where it is metered. Each operator is charged a fixed rate per barrel prorated by the disposal company."

Mr. Oberg says seepage and evaporation can be utilized in most parts of the state, excepting the East Texas and Gulf Coastal territories where rainfall is equal to, or exceeds, evaporation. Seepage and evaporation pits have been successfully used at Cisco, Wichita Falls and in West Texas.

Strictly speaking, he has found evaporation pits probably lose more water by seepage than by evaporation. In the Wichita Falls, Cisco and San Antonio areas, the evaporation is described as such that approximately 800 square feet of surface is required to evaporate one barrel per day throughout the year.

IN WEST TEXAS, where evaporation is greater, about 650 feet of surface is required. In the San Antonio area, an earthen tank covering 100 acres would evaporate approximately 1,960,000 barrels of salt water in a year.

While it is desirable to have pits on a porous soil, Mr. Oberg says, pollution of domestic water wells will result if care is not exercised in selecting sites. Pits have been abandoned in several instances because seepage had polluted underground fresh water supplies.

Analyses of water at Cisco, Breckenridge and Wichita Falls had shown about seven and a half tons, or 118 cubic feet of salt, or solid matter, will be produced in one year by the evaporation of one barrel of salt water daily. This amount of salt, it was said, may cause trouble in time.

To get maximum efficiency from evaporation pits, Mr. Oberg said, they should be shallow and the bottoms as level as possible. If the ground is not level, pits may be built one above the other, or terraced, as a series of shallow pits have been found better than one deep pit.

Storage in low water periods and run-off in high water periods is being used at Orange and Sour Lake, in Gulf Coastal territory. That method is also used in the Wichita Falls and Breckenridge interior territory where water is released from storage pits in periods of heavy rainfall.

AT ORANGE, brine is delivered by the operators to a gathering pit. A system of proper pumps and a cast iron pipeline was installed. The water is pumped to a reservoir covering approximately 160 acres in a marsh south of the Orange oil field. Brine is released from the reservoir in high water periods.

The Hardin County Salt Water Co., organized at Sour Lake, is now operating under injunction obtained by rice growers. Uncontaminated water is necessary in the rice growing season. Growers had been taking water out of Pine Island Bayou and the Neches river. They claimed salt water from Sour Lake was destroying their crops.

Under the injunction, brine is delivered to three reservoirs, where it is retained until such time as the court designates it may be run down Pine Island Bayou.

At Raccoon Bend, a cast iron pipeline has been built from collection pits in the field to an earthen reservoir covering approximately 100 acres. Salt water is stored there in the rice irrigating seasons and allowed to escape into the Brazos river only in high water periods.

In all fields where salt water is handled, a cast iron pipeline is used due to the corrosive action of brine. Centrifugal pumps, which are generally used for handling salt water, should be either of all iron or all bronze construction, Mr. Oberg says, as electrolytic action will soon destroy them otherwise.

It is cautioned that in fields where salt water is allowed to run directly into the streams or the sea, and when it is stored in dry periods for release later, great care must be taken against pollution from waste oil.

The federal government is now taking steps to curtail pollution of navigable waters and it is necessary that brine pass through a skimming plant in order to remove all waste oil. When salt water is run directly into streams, complaints from pollution will be greatly reduced if suitable skimming plants are installed and all waste oil or b.s. is removed, as the average layman upon seeing an oil scum on a stream will jump to the conclusion that it is also polluted with salt water, even when there may be no brine entering.

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How Gulf Coastal Wells Are Drilled In Rio Bravo Practice

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON

DETAILS of cost of a drilling well in the Rio Bravo Oil Co.'s system of making up work order estimates are segregated into five jobs, or divisions.

Job 1 includes clearing location, derrick, erection of derrick, erection of engine and pump platform, teaming for slush pits and boiler pits, and so forth.

Job 2 includes material and labor for all lines necessary to the operation of the well; that is, water, gas, mud and flow lines.

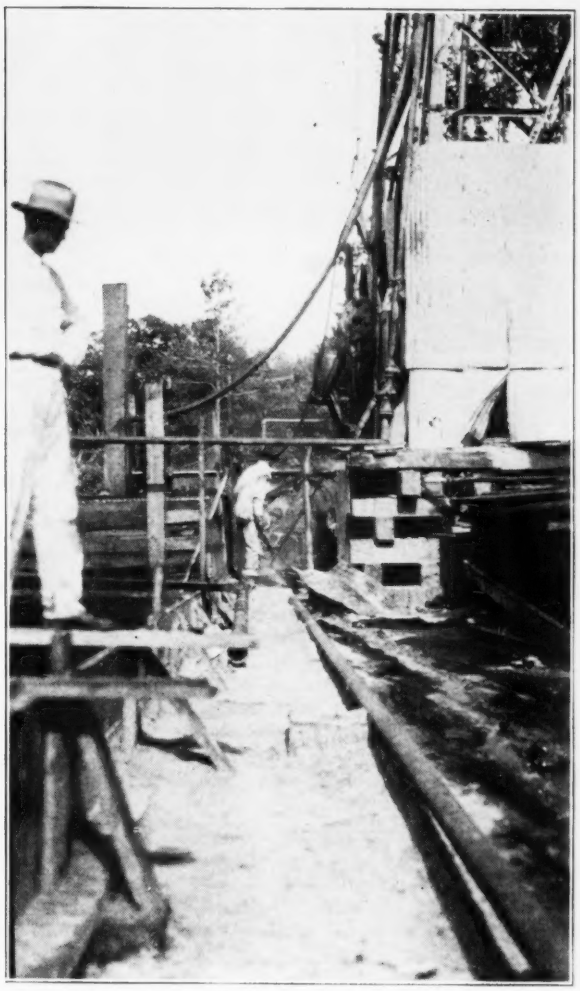
Job 3 includes teaming, labor and material necessary to driving the rig on location and assembling it to start drilling.

Job 4 includes all material, labor, fuel and other charges incidental to the drilling and completion of the well.

Job 5 includes labor and teaming incidental to dismantling the rig.

A requisition covering all the material needed to complete the job, except screen, back pressure valve and packer, accompanies the work order request as submitted.

The three items excepted are not included in the original requisition because the amount of screen, the size and mesh are determined as sand is found and, thus, it is better practice to order the screen as and when needed.



A drilling well in Gulf Coastal Texas, about to be washed at completion

In rigging up for a well, according to Roxie Wright, Pierce Junction field foreman for the Rio Bravo, the boilers should be set about 125 to 150 feet from the well, on the engine side of the derrick. They should be in line with the pumps in order to make the steam line as straight as possible.

The boilers, Mr. Wright's experience has shown, should be set about five feet apart. The header should be made up in four sections connected with unions. All boiler connections should be put together with unions, as in this manner the fittings can be readily dismantled and reassembled.

All threads should have white lead applied to them when they are made up. This is a precaution against leaks as well as an aid in making up and breaking out the connection. Half swings should be installed in the steam line at the boilers, engine and pumps in order to take care of expansion and contraction.

The engine should be set in the center of the drawworks side of the derrick in Rio Bravo practice, directly opposite the "V" and about flush with the floor. It should be well cribbed and braced. The drawworks should be set so that the middle of the drum is in line with the center of the derrick and should be well braced from the engine and rotary sills.

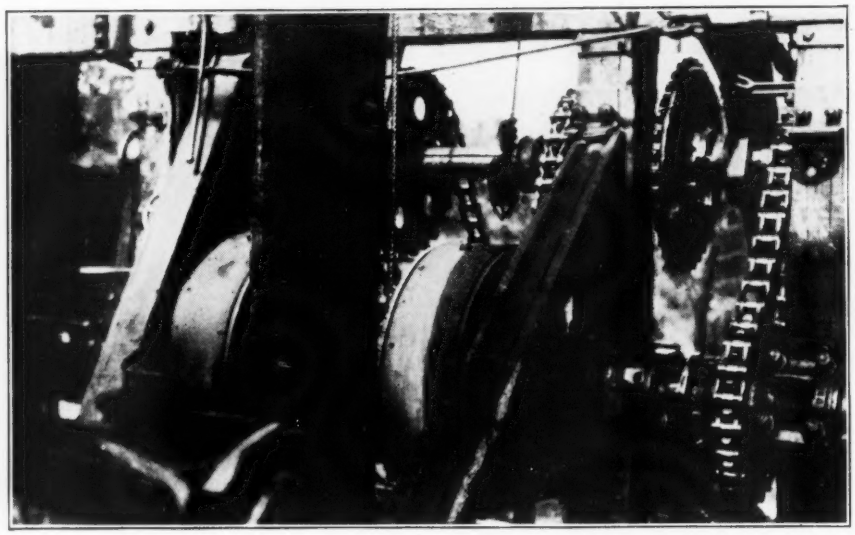
Pumps should be set on a separate pump platform about eight feet from the derrick. They should be equipped with flanged suctions and flanged manifold in order to facilitate dismantling and reassembling. The pump discharge from the manifold should be of 3-inch line pipe laid to the corner of the derrick with a 3-inch standpipe about 35 feet in length clamped to the derrick leg.

Here it should be noted also that the pump manifold and standpipe should have as few right angle bends as possible in order to reduce the load on the pumps. The rotary and crown block should be aligned with the center of the derrick. Thus, with a level derrick and all machinery in proper alignment, there is better opportunity for smoother operations and a straighter hole.

The breakout tongs should be hung with a cable and snatch block from 3 x 12 plank laying across the derrick girts about 60 feet above the floor level. The tongs should be well balanced with weights, so that they can be easily swung into place on the pipe.

Each rig should have a tool bench with a definite place for each piece of this type of equipment. There should be also a rack in one corner of the derrick to hang up the chain tongs. The slips, adapters and all other large tools that are needed in connection with the rotary should have a specific place on the derrick floor. This location not only should be handy, so that the tool is readily available, but also it should be out of the way to prevent the men working on the derrick floor stumbling over it.

All equipment should be rigidly inspected while tearing down the rig. If any parts are worn out, or worn too much for safe use, new equipment should be ordered. This will make material readily available when the rig is set up again. Drilling equipment cannot be too rigidly inspected, as the cost of the hole be-



Rotary drawworks assembly on a Gulf Coastal Texas drilling well

ing drilled and often times human life are at stake.

Much time can be saved in rigging up, according to Mr. Wright, if the connections are put together in a definite way with unions, so that manifolds can be taken apart and reassembled in sections. In this manner, threads are saved. The threading of special cut connections is one of the big lost-time factors in rigging up.

In dismantling a rig, it has been found much time can be similarly saved for the crew rigging up again if the equipment is stacked on the floor so that the material needed first is readily available. Then when the teamsters start moving the rig it is not necessary to scatter everything to the four corners of the derrick floor to get at the material which the rigging crew needs first.

The actual time needed to rig up depends primarily on the location and, secondly, on the manner and shape in which the equipment is moved. Mr. Wright describes five to seven days as good time.

In connection with lubrication he has found each rig should be adequately equipped. He uses a Voltz lubricator and steam trap, or similar equipment.

The lubricator and trap should be examined frequently, it is pointed out, to see that they are functioning properly. Dry steam carrying its own lubricant is described as a big economy both in fuel consumed and in repairs to steam cylinders.

Swivels should be inspected as to lubrication every three or four days. The traveling and crown blocks also should be frequently inspected and kept adequately greased. It is generally recognized as best practice for each driller to thoroughly oil up his rig when he goes on duty.

In starting a new hole it is essential that the derrick be plumb, the rotary level and centered and the blocks centered and aligned with the rotary. Mr. Wright urges rotating and pumping slowly for the first 100 feet in depth.

He also says best practice is to slow down the pump and rotary while drilling through sand and boulders, so that the formation is walled up. If this procedure is not followed there is a tendency to wash out a cavity, which is a constant source of trouble.

Cavities in the hole make it hard to "fish" and they also tend to buckle the drill stem while spudding or when carrying an appreciable weight on the bit. Too much weight should not be carried on the bit, as it usually results in crooked pipe, crooked hole and quite often a fishing job.

In drilling gumbo, care should be taken not to let the bit ball up badly, for it is often next to impossible to clean off the face of the bit by spudding. In spudding off a bit it is just as good practice to rotate the bit down slowly as it is to drop it and the first mentioned method is much easier on the drill pipe.

In general, the easiest way to dig gumbo is to hold up on the bit and try to shave off the formation. This method not only makes it easier to take the gumbo into the mud solution but it also delays the tendency to ball up the bit.

Mr. Wright cautions, in drilling hard sand and lime, that care should be taken not to run a bit until it "diamond points," for it is usually harder to ream out the hole to gage than it is to make new hole. There is also the constant danger of tight places in this type of hole, which may wedge or stick a bit and cause a fishing job.

Continuous coring, especially in sands and sandy shales, is very hard on the walls of the hole. This is because of the impossibility of keeping mud equalized in the period of constant going-in and coming-out of the hole. It is described as generally good practice to pump the hole about 40 minutes before and about one to two hours after cutting a core. This, of course, depends a great deal on the depth and on the condition of the hole.

Mud used in drilling depends largely on the kind of formation, also the depth and condition of the hole. It should be always as free from sand as possible. Sharp sand in the mud will tend to cut out the pumps and other fittings.

With increasing depth it is usually necessary to carry heavier mud to keep the hole walled up. The driller should keep a good check on his mud at all times, for he is liable, especially in the Gulf Coastal region, to run into a gas sand or pocket with the chance of a blowout.

Mr. Wright believes that lack of proper care of drilling mud is alone responsible for about 75 per cent of all blowouts in Gulf Coastal territory. If the mud becomes badly gas-cut and it is impossible to wall up the hole with fresh mud he has found it best to add weight by using Bariod or similar materials.

He cautions that the driller should inspect his bit carefully before runing it in the hole to see that it is true to gage and in good condition. Also, he should inspect it carefully after running. Then he will know how hard he ran on the bit and what it should have done. He is then in better position to judge if there was any defect in the dressing of the bit or in the bit material.

It is very important that findings should be reported to the field foreman.

The drill collar should be inspected often, especially in hard digging, as it is likely to bell at the bottom and lose a bit in the hole.

Perhaps the most important item to watch in putting down a well is the drill stem. After the drill pipe begins to crystallize it should be discarded, as one or more bad fishing jobs may result in losing the hole, or a large part of it, and this may more than compensate for a new drilling string.

Drill couplings should be examined frequently and replaced immediately whenever they show much wear. Casing protectors used on drill pipe are of great value, serving to protect drill couplings and tool joints from wear when running inside casing; also they protect the casing string.

Casing protectors should be used above each tool joint in the string that is running inside of casing and at any other place in the hole where appreciable wear is noticed.

In Gulf Coastal territory, surface casing should be set at depth of 1400-1800 feet to case off all soft surface sands and boulder zones. Before setting this casing, Rio Bravo practice calls for running a rock bit

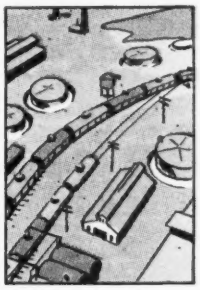
to bottom to be sure the hole is full gage.

It is also good practice to rathole ahead about 15 feet in order to be sure of a good casing seat. It is not customary to cement surface casing in the Gulf Coast. Surface casing, usually 10-inch, is run without a float shoe but with a wooden guide plug in an ordinary casing shoe.

The 6⅝-inch casing is usually set on top of the sand. Before running this string Rio Bravo practice calls for reaming with a double of 6-inch drill pipe on bottom. The 6⅝-inch casing is usually run with a float shoe on bottom. This lightens the load on the rig. The casing should be kept full of mud while being run into the hole.

In cementing practice, after landing of casing, Mr. Wright circulates the mud for some time in order to thoroughly equalize the fluid column on both sides of the casing. After the cementing job proper, usually with a Halliburton outfit in the Gulf Coast, he urges that the plug should be drilled out slowly and without much weight on the bit. This is to avoid any tendency to shatter the cement around the set shoe.

After casing is cemented on top of sand, a complete Christmas tree with blowout preventer is installed, but without top valve. The assembly is turnbuckled into place as a safety factor in case the well should try to blow out while drilling plug. It is also described as good practice to install a float valve in the drill pipe. This will serve as a check valve in case the well tries to blow out through drill stem.



When the desired amount of sand has been cored and drilled, the hole should be reamed to bottom with a full gage bit and the bottom hole measurement taken.

The hole is then ready for screen and liner. In Rio Bravo practice, the rotary is taken off the hole and the top master valve is installed and turnbuckled to the 10-inch casing clamp. The entire Christmas tree, and more particularly the blowout preventer rams, should be carefully examined and replaced if not in good condition. The flow line, through which the well is to clean itself, should be tied down.

The strainer, with double back pressure valve and enough blank pipe of the same size to extend up into the casing about 75 feet, is next made up and run into the hole. The wash pipe is then made up and run inside the liner. The wash pipe is suspended from the wash ring in the setting tool of the red seal ratchet packer, which is attached to the top of the liner.

Top collar on the wash pipe should extend a foot or so above the ring in the setting tool, so that the wash pipe is actually supported by the back pressure valve. Thus, circulation is assured through the back pressure and not through the screen.

Threads in both the packer and setting tool should be carefully examined and if they are in good condition they should be thoroughly lubricated with cup grease.

The setting tool should be run up by hand inside the packer until it is tight, then backed off one-quarter turn. In this connection, Mr. Wright says, a setting tool with more than 16 threads should not be used.

With this complete assembly in the hole it is considered good practice to test circulation through the back pressure before running deeper. The strainer is then run to bottom of the hole on the drill stem.

After feeling bottom and getting circulation the string is picked up off bottom, a bradenhead is installed on top of the master gate, a drill pipe space nipple is placed in the string, so that after the setting tool is unscrewed and the casing collapsed, the drill pipe may be raised through the bradenhead a sufficient distance to lift the wash pipe off the back pressure valve and thus gain circulation inside the screen. The well is, thereby, kept completely under control while it is being washed in.

With the strainer a few feet off bottom and all connections in place it is time to again get circulation. The mud should be gradually thinned with fresh water, the old mud being pumped away. The hole should be washed long enough for clear water to get started back from bottom, the screen meanwhile being lowered to bottom.

The setting tool is then backed off from the screen and the packer collapsed with the weight of the drill pipe. After this is accomplished the wash pipe is picked off bottom about five feet and the inside of the screen is washed until the returns show it to be clean. The bradenhead is then unscrewed from the master valve and the drill pipe is picked up enough to lift the wash pipe out of the screen.

Then the drill pipe is set back on the blowout preventer rams, the master gate closed and the well allowed to clean itself through the wing of the Christmas tree equipped with choker. The choker is left wide open (1½-inch opening in a 4-inch connection) until the well begins to show a considerable flow of oil and gas. Then the choker is gradually pinched down until the well flow is clean and ready to be switched into the tanks.

The final choker on which the well is permitted to flow is dependent upon the pressure, the quantity of oil produced, the percentage of impurities and the action of other similar wells in the field. After the well has settled down to steady flow, however, it is considered good practice not to change the size of choker unless cut oil and b.s. appear.

New Patents

Prepared by R. E. Burnham, patent and trade-mark attorney, Continental Trust Building, Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

August 13, 1929

MISCELLANEOUS

Method of making sucker-rods—Walter M. Leck, St. Louis, Mo., assignor to Scullin Steel Co., same place. Filed July 23, 1928. No. 1,724,032.

Predetermining and indicating mechanism for dispensers—Paul S. Shield, Cincinnati, Ohio. Filed Aug. 30, 1926. No. 1,724,429.

Liquid-dispensing device—Elmer C. Hake, Covington, Ky., assignor to Ludlow Mfg. Co., same place. Filed July 27, 1928. No. 1,724,475.

August 27, 1929

REFINING

Process and apparatus for treating oils—George D. White, Port Arthur, Tex., assignor to Texas Co., New York, N. Y. Filed Mar. 15, 1920. No. 1,726,280.

PRODUCTION

Method of making drilling-jars—Paul Arbon, Tulsa, Okla., assignor to Paul Arbon & Co., same place. Filed June 2, 1925. No. 1,725,842.

Universal hanger for well-drilling tools—Dennis L. Driscoll, Alhambra, Cal. Filed Mar. 30, 1925. No. 1,725,902.

Dose-distributor—George H. Ennie, Long Beach, Cal. Filed Jan. 15, 1927. No. 1,725,979.

Oil field-rejuvenating means—Dalton U. Powell, Woodsfield, Ohio, assignor to Oil Recovery Corporation, Wheeling, W. Va. Filed Sept. 7, 1927. No. 1,726,041.

Bit—James H. Swift, Huntington Park, and Lloyd Dalldorf, Southgate, Cal. Filed May 3, 1926. No. 1,726,049.

Oil-well apparatus—John A. Yerkes, Long Beach, Cal. Filed April 13, 1926. No. 1,726,052.

Combined guiding and centering device—Jess F. Lyons, Chanute, Kans. Filed Sept. 17, 1928. No. 1,726,079.

Sucker-rod elevator—Oran C. Needham, Fort Worth, Tex. Filed Nov. 12, 1927. No. 1,726,116.

Fishing-tool—William W. Fry, Los Angeles, Cal., assignor of one-half to Robinson Packer Co., Tulsa, Okla. Filed Aug. 5, 1926. No. 1,726,218.

Derrick-jack—Arthur L. Day, Tulsa, Okla., assignor to Braden Steel & Winch Co., same place. Filed July 5, 1927. No. 1,726,260.

Packer-head—William W. Fry, Los Angeles, Cal., assignor of one-half to Robinson Packer Co., Tulsa, Okla. Filed Aug. 5, 1926. No. 1,726,292.

Swab—Forest H. Miracle, Tulsa, Okla. Filed April 30, 1927. No. 1, 726,407.

Crown and traveling block pulley—John A. Tidball, Dallas, Tex., assignor to International Derrick & Equipment Co., Columbus, Ohio. Filed Aug. 17, 1927. No. 1, 726,507.

Clamping-spider—Marvin B. Davis, Kansas City, Mo. Filed April 30, 1926. No. 1,726,521.

MISCELLANEOUS

Apparatus for purifying waste lubricating oil—John C. Briel, Sterling, Colo. Filed Jan. 7, 1925. No. 1, 725,845.

Nozzle for gasoline-filling-station hose—John C. Seidel, Portland, Me. Filed Jan. 9, 1928. No. 1, 726,044.

Breather-bag—Robert E. Wilson, Chicago, Ill., and John E. Moore and George W. Chenicek, Whiting, Ind., assignors to Standard Oil Co. of Indiana. Filed April 1, 1927. No. 1,726,281.

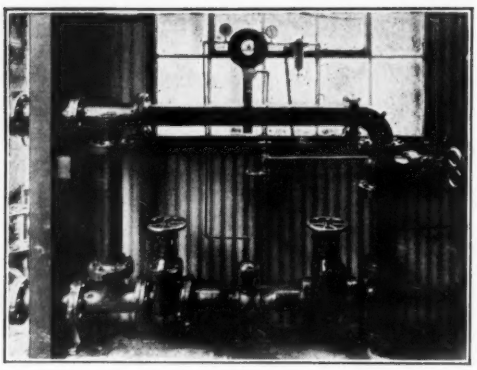
Tank-gauge—Jennings B. Hamblen, Whiting, Ind., assignor to Standard Oil Co. of Indiana. Filed May 13, 1927. No. 1,726,296.

Treatment of emulsion oils—Elmer H. Payne and Samuel A. Montgomery, Woodriver, Ill., assignors to Standard Oil Co. of Indiana. Filed March 1, 1922. No. 1,726,310.

Treatment of emulsion oils—Elmer H. Payne and Samuel A. Montgomery, Woodriver, Ill., assignors to Standard Oil Co. of Indiana. Filed March 1, 1922. No. 1,726,310.

Tycos Steam Boiler Gas-Fuel Governor

(Pilot Operated)



Tycos Steam Boiler Gas Fuel Governor (Pilot Operated), maintaining constant steam header pressures in natural gasoline power plant by regulating the gas supply to the battery of boiler.

THIS installation insures constant steam pressures under varying load conditions by properly regulating the gas fuel supply to the burners. Full steam pressures are maintained under extreme operating conditions, thus insuring a high efficiency and consistent operation of the boiler plant.

An increase in steam consumption or tendency towards a drop in boiler pressure immediately re-acts through the regulator to further open the diaphragm valve in the gas supply line, to such a position as is necessary to maintain constant steam pressures under this new condition; a decrease in steam consumption, or tendency toward an increase in boiler pressure likewise immediately re-acts to throttle down the diaphragm valve to meet this more limited fuel requirement. More gas is admitted or the supply is throttled down as the load increases or decreases.

With the Tycos installation shown above the operator has complete information before him as to the pressures he is controlling, and the exact action of the control valve.

Write today for further information on this installation.

Taylor Instrument Companies
ROCHESTER, N. Y., U. S. A.
CANADIAN PLANT, TYCOS BUILDING, TORONTO
MANUFACTURING DISTRIBUTORS IN GREAT BRITAIN
SHORT & MASON, LTD., LONDON

Tycos Temperature Instruments
INDICATING-RECORDING-CONTROLLING

Six Refineries Buy Oliver United Filters During May and June

BOTH contact work and residuum treatment were involved in the orders for filters sent in by six different refining companies during May and June.

This time, as in the past, refineries knew that Oliver United makes the proper type filter unit for any filtering problem that comes up.

OLIVER UNITED FILTERS INC.

SAN FRANCISCO, Fed. Reserve Bank Bldg. NEW YORK, 33 West 42nd St.
CHICAGO, 565 Washington Blvd. SALT LAKE CITY, Felt Bldg.
LOS ANGELES, Central Bldg. LONDON, W. C. 1, 150 Southampton Row
PARIS, 63 Ave. des Champs Elysees

New Equipment

Naylor Pipe Co., Chicago, manufacturer of Naylor line pipe, has opened a new sales office in the Post Dispatch Bldg., Houston. E. C. Kirby has been appointed district sales manager in Texas and Louisiana, with offices at Houston.

* * *

Pittsburgh Valve, Foundry & Construction Co., Pittsburgh, Pa., has published a 62-page booklet on its advanced type of gate valves for steam, oil and gas lines. The booklet includes sectional and exterior views and gives dimensions and price lists of these valves. The company makes fittings and fabricates and erects piping systems.

* * *

Metric Metal Works, Erie, Pa. works of the American Meter Co., has published bulletin E-2 of 104 pages on the operation of Westcott orifice meters for gas, air, steam, oil or water. It also has off the press bulletin E-5 on metric rate-volume controllers, describing the method of installation for automatically controlling the rate of flow of gas, oil, air, steam, water and other liquids.

Bulletin E-3 describes metric indicating flowmeters for gas, oil, etc., and laboratory bulletin E-1 contains a description of the company's laboratory at Erie, with discussion of preparation of equipment and procedure during tests.

* * *

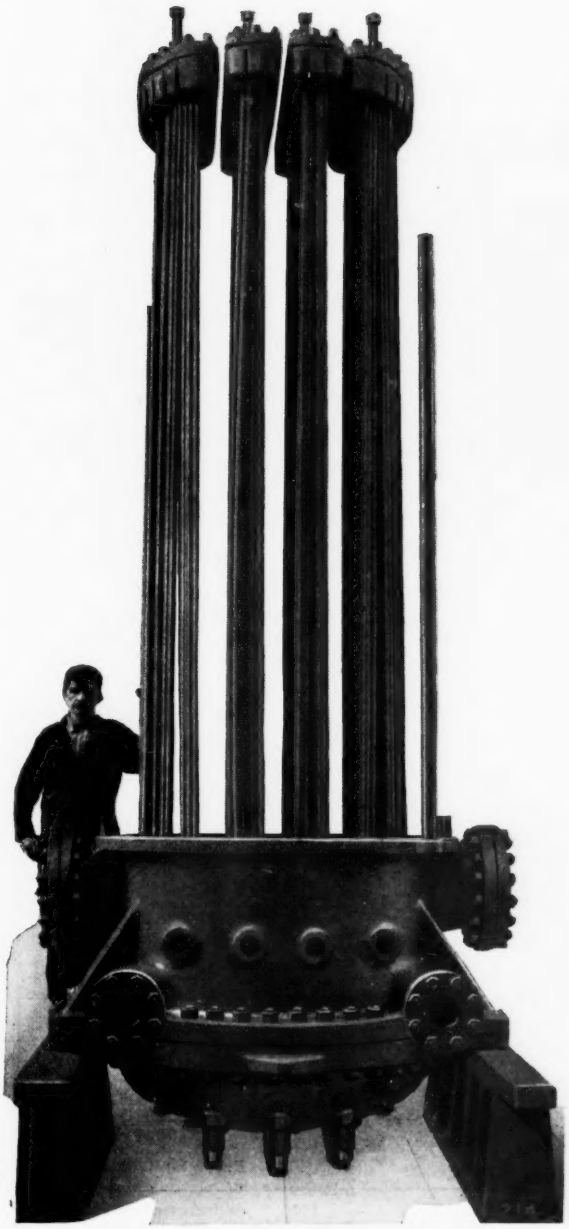
Hughes Tool Co., Houston, manufacturer of oil field equipment, has added 56,000 square feet of floor space to its main manufacturing plant's machine shop at Houston for the manufacture of rock bits, cones, drilling valves, core bits and tool joints. A reduction in the price of rock bit cones has been announced. About $1,000,000, the company says, will have been spent by the end of the year in increasing manufacturing facilities.

* * *

The Pontiac Tractor Co., Pontiac, Mich., has announced a new arc-welding plant mounted with McCormick-Deering tractor capable of moving under its own power at 15 miles per hour. Both 200 and 300 ampere machines are made.

* * *

Westinghouse Electric & Mfg. Co., has off the press circular 1856 describing bedplates for types SVR and DVR speed reducers and giving information on construction, dimensions, weights, motor sizes with and without outboard bearing pedestals in tabulated form, accompanied by outline drawings and illustrations.



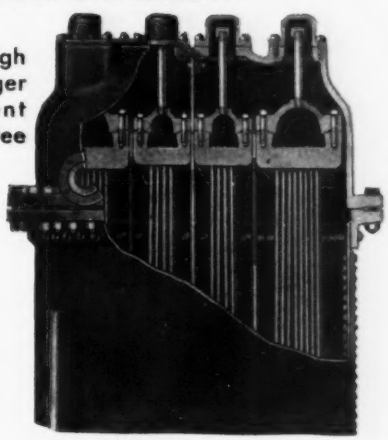
Leach High Pressure Heat Exchanger with shell removed.

NO TWO rows of tubes in a heat exchanger are the same temperature or have equal expansion in service. The drawings on the opposite page show the relative expansion of the tubes in a typical high pressure vapor heat exchanger. A single floating head could not compensate for such changes in tube length. For this reason, the Leach Fracto-Condenser is built with separate floating heads.

As a result of the divided head construction, no leakage at the tube ends due to expansion has yet developed in any of the Leach exchangers in service for periods up to six years, at temperatures as high as 730° F. and pressures as high as 1500 lbs. per sq. in.

The divided head construction also makes possible the fractional condensation of several different products in a single heat exchanger. If desired, a separate cooling medium, independently regulated, may be used in each tube bundle of a Leach Fracto-Condenser. By fractional condensation in the vapor heat exchanger, it is possible to take a part of the load from the tower, making possible sharper separation in the tower, or permitting increased throughput, as may be desired.

Other features of the Leach Fracto-Condenser are the condensate drainage basins which keep the corrosive distillate from contact with flanges and machined surfaces, the steaming out connections on the tube heads and ample provision of handholes and cleaning ports. The Leach construction is fully protected by patents in the United States and abroad.



Cross Section of Leach High Pressure Heat Exchanger showing independent floating heads, each free to expand.

We will be glad to submit plans for the heat exchange equipment in new plants, and for the modernization of old refineries. Frequently, by the addition of the proper heat exchange equipment, an obsolete plant can be made to equal the most modern plant in performance.

C. H. LEACH COMPANY

225 BROADWAY, NEW YORK, N. Y.

Main Office: Elizabeth, N. J.

LEACH

Fracto Control TRADE MARK REG.

The Tariff on Oil—

Arguments FOR As Presented In The Senate Committee Hearing

National Petroleum News offers, without comment of its own, a synopsis of the arguments, pro and con, in the oil tariff debate before the United States Senate Committee on Finance.

This issue carries the points made in favor of an import duty. The next issue will carry the arguments presented against the tariff on petroleum and its products.

THAT a tariff on imported crude oil of $1 a barrel would not affect the price of gasoline to the consumer, but would materially benefit the producer, partly at the expense of the refining companies, was the principal point in favor of a tariff brought out in the brief of the Mid-Continent Royalty Owners Association.

Such a tariff would somewhat advance the price of fuel oil to the consumer, it was also brought out. After introducing tables showing supply and demand for oil for several years, prices, and also the trend of general commodity prices, the brief says:

"Examination, in this light, of prices of crude petroleum, gasoline and fuel oil, as the outstanding elements in point of both volume and value, in their relation to supply and demand, discloses several pertinent facts. These are in a measure natural results of a controlled market.

"Prices of gasoline, a commodity of guaranteed utilization, being without a substitute, move evenly, reflecting changes in general business conditions, rather than changes in stocks, while prices of fuel oil, which in a majority of its uses is in open competition with other fuels fluctuate quite violently, under direct influence of supply of heavy oil available from imports, with crude prices reflecting the resulting loss.

"In a market free from manipulation any considerable amount of foreign oil, which is comparatively low in gravity, added to or withheld from stocks which, due to the preponderance of domestic crude, are predominately high in gravity, would change the relative amounts of heavy and light oil surpluses and in consequence be reflected in gasoline and fuel oil prices. Such however is not the case, even the expected advantage of cheaply produced foreign products being obviated by identical control of both domestic market and such foreign oil as reaches the domestic market.

"The accompanying table is strikingly indicative of this relationship. Prices of gasoline, fuel oil and crude petroleum are shown for two periods, namely the months of February, 1926, when imports of foreign crude amounted to 3,743,000 barrels, their lowest point in several years, and for February, 1929, when imports amounted to 7,016,000 barrels, an amount nearly double the former level.

(See Table No. 1)

"During the period covered in the tabulation below, wholesale prices of all commodities decreased 5 per cent, which might reasonably be assumed to represent the change in general business conditions. The corresponding decrease in gasoline prices, in even less degree, might well be attributed to this very source.

"It is then apparent that the increase of nearly 100 per cent in amount of heavy foreign oil is responsible for a 41.4 per cent depression of fuel oil prices. At the same time prices of domestic crude, capable of yielding perhaps three times as much gasoline as the imported oil, decline 33.5 per cent. A great part of this decrease, in view of the stability of gasoline prices, must be an unjust impression, upon the domestic producer, of refinery loss brought about by lowered fuel oil prices.

"It is thus that imports are constrained to bear upon prices of domestic crude petroleum. Imports have been a cause and continue a constant source of distress to the domestic producer.

"The benefit of a tariff upon imports of crude petroleum and its products will be stabilization of crude prices, but cannot be exaggerated to

TABLE No. 1

Prices of Gasoline, Fuel Oil, and Crude Petroleum of Various Grades and at Various Points for the Months of February, 1926, and February, 1929

	February 1926	Percentage of increase or decrease	February 1929
Gasoline at service stations (cents per gallon):			
Washington	21.0	— 5	20.0
New Orleans	20.5	— 4	19.5
San Francisco	20.0	— 5	19.0
Tulsa	19.0	.....	19.0
Average	20.0	— 2.5	19.5
Fuel oil (dollars per barrel):			
Oklahoma-Kansas 24°-26°	1.25	—46	0.68
North Texas 24°-26°	1.25	—46	0.68
North Louisiana 18°-20°	1.18	—36	0.75
Arkansas 16°-20°	1.10	—32	0.75
Gulf coast	1.70	—47	0.90
Chicago 22°-26°	1.23	—45	0.68
Average	1.28	—41.4	0.75
Crude petroleum (dollars per barrel):			
Oklahoma-Kansas 36°-36.9°	2.04	—41	1.20
Gulf Coast grade A	1.50	—20	1.20
Illinois	2.12	—32	1.45
Panhandle 34°-36.9°	1.50	—39	0.92
Average	1.88	—33.5	1.25
California (dollars per barrel):			
Fuel oil 15°-20°	1.04	—18	0.85
Crude petroleum—Long Beach 30°	1.46	—14	1.25

indicate inflation to an extent that would result in defeat of the purpose of this measure.

"Stability will bring to the farmer increased revenue and appreciation of land values, to the merchant and manufacturer a healthy stimulus to business activity.

"The independent domestic producing industry will be relieved of the ruinous burden of excessive refinery profit and of contributing fuel oil at uneconomic prices to other industries whose products receive the protection it has heretofore been denied. Prices of gasoline to the consuming public will not only be unaffected but to some extent guaranteed by protection of the last remaining barrier to complete centralized control of the petroleum industry in all its branches."

The brief goes on to give a theoretical comparison of crude, gasoline and fuel oil values, as based on Feb. 1929 prices and estimated consumption for 1929, with values prevailing in February, 1926, a period of lowest imports, these prices being readjusted to take into account a five per cent decline in general business conditions from February, 1926.

Estimated values for 1929, based on actual February, 1929, prices are $1,250,000,000 for crude, on the basis of 1,000,000,000 barrels of production at $1.25 a barrel; $3,153,150,000, for gasoline on the basis of 385,000,000 barrels consumption at $0.195 per gallon: $320,250.000 for fuel oil, on the basis of 427.000,000 barrels consumption at a price of $0.75 a barrel.

Assuming a tariff effective as of Jan. 1, this year, and assuming prices of February, 1926, readjusted to the five per cent decline in general business conditions, in effect, this scale of values would be $1,790,000,000 for crude, a gain to the producer of $540,000,000. On gasoline the value would be $3,153,150,000 the same as on the basis of February, 1929, prices; on fuel oil would be $520,940,000, a loss to consumers of $200,690,000 as compared with February, 1929, prices. Of the gain of $540,000,000 to producers the brief estimates that $300,000,000 would be taken as a loss by refiners.

* * *

"AT THE end of the year 1929, we had in the United States 330,000 wells producing 900,364,000 barrels of oil with a daily average of 7.5 barrels. Of this number of wells approximately 250,000 average less than one barrel per day, per well. On account of the present price of crude petroleum these small wells are being produced at a loss to the operator and, unless the market is improved, must be abandoned.

"In the event they should be abandoned there would be an actual economic loss of about 80,000,000 barrels of high grade oil a year.

"As against the 900,364.000 barrels of oil produced in the United States we had a domestic demand for 812,764,000 barrels of oil, leaving a domestic production in excess of demand (domestic) of 87,600,000 barrels. At the same time we imported (largely from South American countries) 79,583,000 barrels; making a total excess over demand of 167,183,000 barrels.

"Imported oil is of low grade and is produced in foreign countries under cheap labor conditions and it can be delivered in the United States at a price much below the actual cost of production of domestic oil.

"As a result of this condition the industry in America is now suffering, and in many places great numbers of laborers are now out of employment, and owing to the low price of domestic crude there naturally follows the tendency to encourage wasteful and uneconomic use thereof." **From the brief of the Independent Petroleum Association of America.**

* * *

"THE bituminous mining industry, with an investment of billions of dollars, and employing hundreds of thousands of men, is rapidly losing some of its important established markets through the importation of vast quantities of low-grade oil produced under conditions which would be intolerable to American workers. The industry in the past has accepted the competition of domestic oil philosophically.

"It has no patience with the prospect of losing more of its markets to oil competition when the benefits are to be enjoyed by producing concerns located in countries with intolerably low standards of living. A moderate duty on imported petroleum and fuel oil will preserve these markets for American industry.

"If the imposition of a duty on this Venezuelan production would have the effect of substantially adding to the cost of gasoline to the American people, that circumstance would need to be given considerable weight. However, as has already been pointed out, the recovery of gasoline from Venezuelan crude is extremely slight, constituting on the average less than 10 per cent of the crude from which it is extracted—Roughly speaking only 10 per cent of the duty imposed upon crude petroleum (Venezuelan) would fall upon the gasoline contained in it. Under the conditions under which gasoline is marketed in this country today, it would require a very high duty on crude oil to have any effect upon the retail price of gasoline.

"Moreover, even in the case of crude oil, the result would be largely confined to the Atlantic seaboard. Even there the effect would be not to raise prices above the normal level but to restore prices to the level prevailing before the beginning of this influx of this petroleum produced under un-American conditions.

"The price of bunker oil today is lower in New York than in any of the ports of the countries with whose shipping we have to compete. In May, 1929, the price of bunker oil per barrel was $2.52 in North African ports, $2.34 in British ports, $2.07 in Argentine, $1.60 in Cuba, $1.25 in the Canal Zone and $1.05 in New York. The price of oil in New York harbor would have to be raised $1.29 a barrel before it would be as profitable for an English vessel to bunker at a British port as in New York. Foreign and domestic shipping is buying its oil in American ports whenever it can do so."—**From the brief of Harry L. Gandy, Washington, representing the National Coal Association.**

* * *

"THE 79,583,000 barrels of imported crude petroleum produced more than 40,000,000 barrels of fuel oil. This fuel oil took the place of coal in the furnaces of industries along the Gulf and Atlantic

TABLE showing the tank wagon price of gasoline at representative cities, April 30, 1929, and prices for the crude from which this gasoline was manufactured. Introduced in the senate oil tariff hearing by E. B. Howard, Tulsa, representing the Mid-Continent Royalty Owners Association, to bring out that the price to the public of gasoline is not dependent on the price of crude.

Point	Tank Wagon (Cents)	Crude Oil Price (Bbl.)	Source of Crude Oil
New York City	16	$0.95	Foreign
Newark, N. J.	14	$0.95	Foreign
Chicago	14	$1.26	Mid-Continent
Pittsburgh	16	$3.99	Pennsylvania
Louisville, Ky.	15	$1.50	Kentucky
San Francisco	16	$1.11	California
Dallas	11	$1.26	North Texas
New Orleans	10.5	$1.26	La.-Ark.
Denver	15	$0.90–$1.57	Rocky Mts.
Salt Lake	18.5	$0.90–$1.57	Rocky Mts.
Butte, Mont.	19.5	$0.90–$1.57	Rocky Mts.
Boston	16	$0.95	Foreign
Baltimore	14	$0.95	Foreign

coasts. Four barrels of fuel oil produces the same quantity of heat as one ton of coal. This 40,000,000 barrels of fuel oil was therefore equal to 10,000,000 tons of coal, which was displaced by the 40,000,000 barrels of cheap fuel oil imported from Mexico and South American countries in 1928.

"Upon an average it would require twice as many men one year to transport and deliver the 10,000,000 tons of coal to its ultimate place of consumption. Thus we see the importation in 1928 of 40,000,000 barrels of fuel oil displacing and putting out of employment 50,000 American workmen for the period of 2000 days, or one coal miner's year."—**From a statement by E. B. Howard, Tulsa, representing the Mid-Continent Royalty Owners Association.**

* * *

"THE Federal Oil Conservation Board is advocating conservation laws to bring about maximum recovery from the oil producing sands and it is claimed that we are experiencing a waste through not securing maximum recovery.

"It impresses me that the greatest waste we have had since 1926 has been caused by the price structure brought about through free imports. For illustration, we had, in 1927, 323,300 wells in the United States and the daily average production was about 7 barrels. Out of this 323,300 wells it is estimated that 150,000 only averaged one barrel per day. Since that time 50,000 of these wells have been estimated to have been abandoned.

"It is plain to be seen that these wells cannot continue operating on the price structure that we are working under and, once a well is abandoned, no one can afford to drill a new well for such a small initial production. Therefore, this country is suffering a great waste, but if Congress will put a tariff on imports before it is too late we can save this great waste."—**From a statement by W. Scott Heywood, Jennings, La., producer representing the governor and independent producers and royalty owners of Louisiana.**

* * *

"THE Bureau of Mines annual report for 1928 shows that the total demand on the United States filled by corporations having their domicile in the United States amounted to 1,012,002,000 barrels and the total production of the United States for 1928, including natural gasoline and benzol, amounted to 945,460,000 barrels, which proves that the United States production fell short of the total demand 66,542,000 barrels, but right here comes the sad part of the picture.

"These major purchasing companies asked the United States producers, and through their influence with state officials and with the cooperation of state officials, they forced producers in Oklahoma and Texas to put on a curtailing program with a referee, whose duty it was to tell each producer how much he could produce, or how little he could produce.

"While this curtailing program was being put in force, the major companies asking for the curtailing immediately installed their wells in the Seminole, Okla., field with air and gas lift, which unquestionably increased the production approximately one-third more than it would have been had the wells been allowed to produce naturally or on the beam.

"While all this curtailing of production was going on in 1928, the major oil companies imported, duty free, 91,474,000 barrels, mostly from Venezuela and Colombia, produced mostly by themselves and shipped mostly to themselves.

"This 91,474,000 barrels imported into this country left a surplus of 24,832,000 barrels, which they have been calling 'United States over production.' The above figures prove that the oil produced in the United States did not meet the total demand and that there would have been no surplus had it not been for imported oil."—**From a statement by W. Scott Heywood, Jennings, La., producer, representing the governor of Louisiana and independent producers and royalty owners of that state.**

* * *

"APPROXIMATELY 3 per cent of the nation's steel is taken by the one (oil) industry in the state of Oklahoma. Texas and California each take almost as much. The oil industry in the three states named consumes approximately 9 per cent of the nation's steel production. The principal item in this steel bill is pipe or casing.

"The pending bill (tariff) provides a duty of $15 per ton on pipe; oil is now on the free list. The steel producers are prosperous and contented. The oil producers are losing money and are depressed. It is proposed to take by law a bounty of $15 per ton from the struggling oil producer and give it to the prosperous steel producer.

"The measure provides a duty of 2 cents per pound on cordage, 40 per cent on wire rope, 15 per cent on steam engines, 25 per cent on automobiles, 5 cents per pound on aluminum, 2 cents per pound on glycerin, $1 per 1000 board feet on fir logs, 3¼ cents per pound on pork, 6 cents per pound on beef, $1.04 per cwt. on flour, 35 per cent on clothing of cotton and 50 cents per pound plus 50 per cent ad valorem on clothing of wool.

"The oil producer pays the world price plus an average of approximately 25 per cent on everything he buys, and sells his oil at the world price. He buys on a protected market and sells on a free-trade market."—**From a statement by Senator W. B. Pine of Oklahoma.**

Mid-Continent Promotes Sales Division Men

TULSA, Sept. 5.—Lucien Graham Jr., formerly assistant manager of the St. Louis division of the Mid-Continent Petroleum Corp., has arrived in Tulsa to assume his new duties as manager of the Oklahoma division. He succeeds J. C. Miller, who was recently assigned to a special position in the general sales organization and will devote his time to lubrication sales in districts not now served by the division offices.

C. R. Olson, formerly division manager at St. Louis, has been transferred to Tulsa and will become sales promotion manager, a new department.

J. C. McDonnell, assistant treasurer in charge of accounting for the marketing division, has been transferred from St. Louis to Tulsa.

Other changes in the Mid-Continent's personnel include:

S. B. Caldwell, division operating manager succeeds Mr. Graham as assistant division manager; T. L. Elrod, assistant to Mr. Caldwell, becomes division operating manager; C. W. Dunn, formerly supervisor in northern Indiana, succeeds Mr. Elrod as assistant division operating manager; A. P. McGrath, formerly assistant division sales manager, becomes division sales manager, and will have as his assistant E. M. Hornot, formerly distributor salesman in the Indiana territory.

Four new operating districts in the St. Louis division territory have been announced. The four districts and the managers of each are:

Kentucky district, A. J. Shelinger; Indiana district, A. T. Quisenberry; Illinois district, W. P. Parker; and Missouri district, E. E. Bayfield.

Sinclair Promotes P. W. Zumbrook

CHICAGO, Sept. 2.—P. W. Zumbrook, at present manager of bulk sales in the central district for the Sinclair Refining Co., Chicago, assumed the duties of assistant to the district manager of Sinclair's central division, A. H. Sus, Sept. 1. The central district is comprised of five middle western states.

Mr. Zumbrook has been with the Sinclair company 13 years, starting in a clerical position.

C. B. Schoppe, now bulk sales representative of Sinclair at Columbus, O., will succeed Mr. Zumbrook as manager of bulk sales.

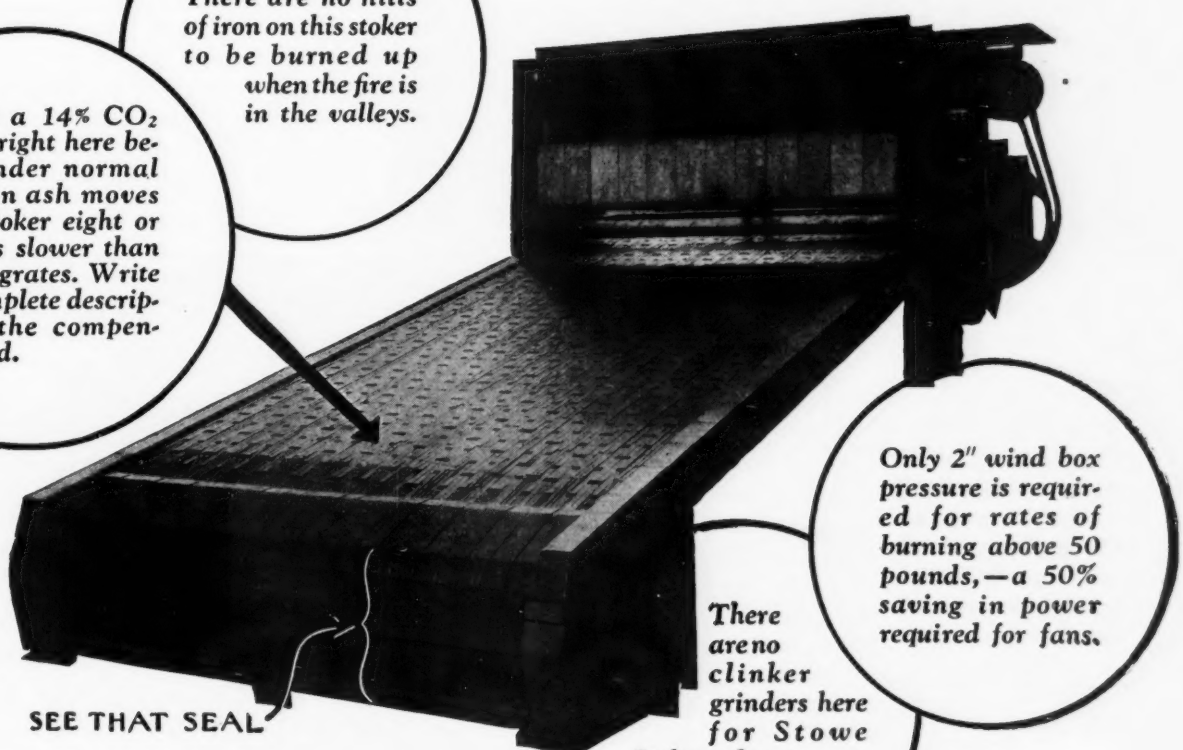
A STOKER IS ONLY AS GOOD AS ITS FUEL BED

WE believe the Stowe produces the most perfect fuel bed ever attained by mechanical means; hence can outdistance older forms of equipment in every phase of operation.

Several years' operation in plants from Massachusetts to Arkansas, and the Great Lakes to the Gulf, has proven the dependability of the Stowe Stoker

There are no hills of iron on this stoker to be burned up when the fire is in the valleys.

There is a 14% CO_2 fuel bed right here because under normal operation ash moves off the stoker eight or ten times slower than on chain grates. Write for a complete description of the compensated feed.



Only 2" wind box pressure is required for rates of burning above 50 pounds,—a 50% saving in power required for fans.

There are no clinker grinders here for Stowe Stokers do not produce clinkers.

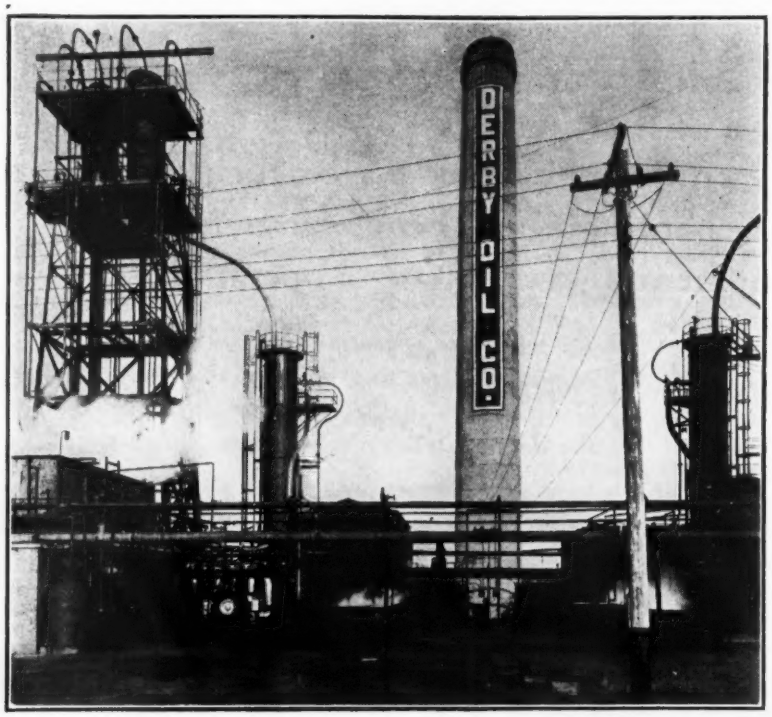
THE JOHNSTON & JENNINGS CO.
879 Addison Rd. Cleveland, Ohio

STOWE STOKERS
Compensated Feed

For their

DUBBS CRACKING PROCESS

After a year's experience with a TRANSIT HOT OIL PUMP, DERBY has installed a second TRANSIT HOT OIL PUMP on a DUBBS STILL. This second pump replaces one of another make. Nuff Ced.



The

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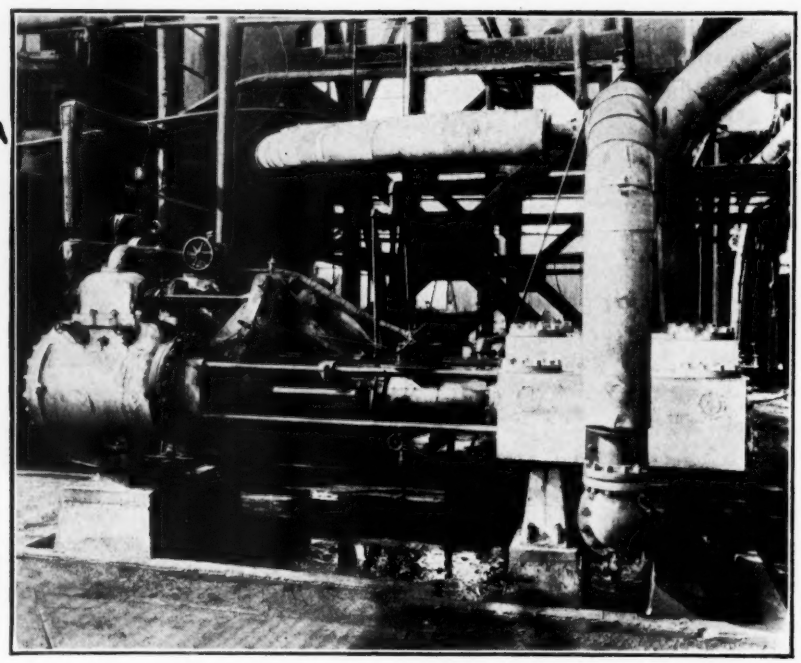


"Flying Squadron" for Tank Work Replaces One-Trade Mechanics

By Allan M. Cleaveland*

FOR the many kinds of tank types—agitators, stills, fractionating towers, floating and stationary-roof tanks, and open storage tanks—the tearing down, building up and repairing processes are accomplished by workers of a certain definite and limited number of mechanical trades.

These are five in number; boilermaking, pipefitting, rigging, welding, carpentering. In addition to these, common labor of pick and shovel nature is necessary.

Because of unions, job specifications, current industrial wage rates, guild apprenticeships and various other reasons which bear upon the condition, one-trade mechanics have a very distinct group consciousness, and also an inter-group consciousness. One group will not do the work of another, nor will a first-class mechanic do the work of a second-class mechanic of the same trade.

A boilermaker gang will remain idle at a job on which they are engaged until a pipefitter gang finishes fitting a flange or running a necessary pipeline. A first-class boilermaker refuses to do the work of a second class boilermaker, and in the absence of a second class boilermaker the work is delayed.

The work of tradesmen of one craft dovetails in with that of another, but there exists a serious overlapping of useful working time. One set of mechanics will be idle while the other is busy and vice versa; but the time they are on the job, idle or busy, goes into the cost of the work.

Whether the overlapping of the working time of different tradesmen on a job is caused by union rulings, company rulings, lack of knowledge of one mechanic of the trade of another, or the pride of the specialist determined to do only one type of work, the result is the same; namely, where idleness prevails in business, waste is a certain consequence.

There are many industrial processes where one-trade mechanics may be used to advantage. There is work which necessitates their specialized training in a particular craft and still further necessitates a certain skill commensurate with their rating in that craft.

However, this article does not deal with industrial processes in general, but with one particular type of mechanical construction in the petroleum industry—that of tank building.

Of the five distinct mechanical trades practiced in the construction of steel tanks; the carpenters are used on the concrete formwork and scaffolding; the riggers for placing plate, I-beams and other material; the boilermakers for laying-out, cutting, reaming, riveting, caulking; the pipefitters to run lines from stills to agitators and storage tanks, and to fit lines inside the steel containers; the welders to strengthen riveted seams and make them tight.

Complete, skimming, wax, lube plants—in fact, all plants—usually occupy a large acreage for the actual refining processes, and the tank farms, because of this, are so frequently isolated from the scene of other operations that it is advisable when using one trade mechanics, to keep gangs of several crafts on the job at once at that period when the specialized work of one overlaps or "ties in" continuously with the work of the other. It is at this stage that waste of time, and therefore waste of money, results. Riggers must wait

*Assistant to Personnel Manager, Johns-Manville Corp.

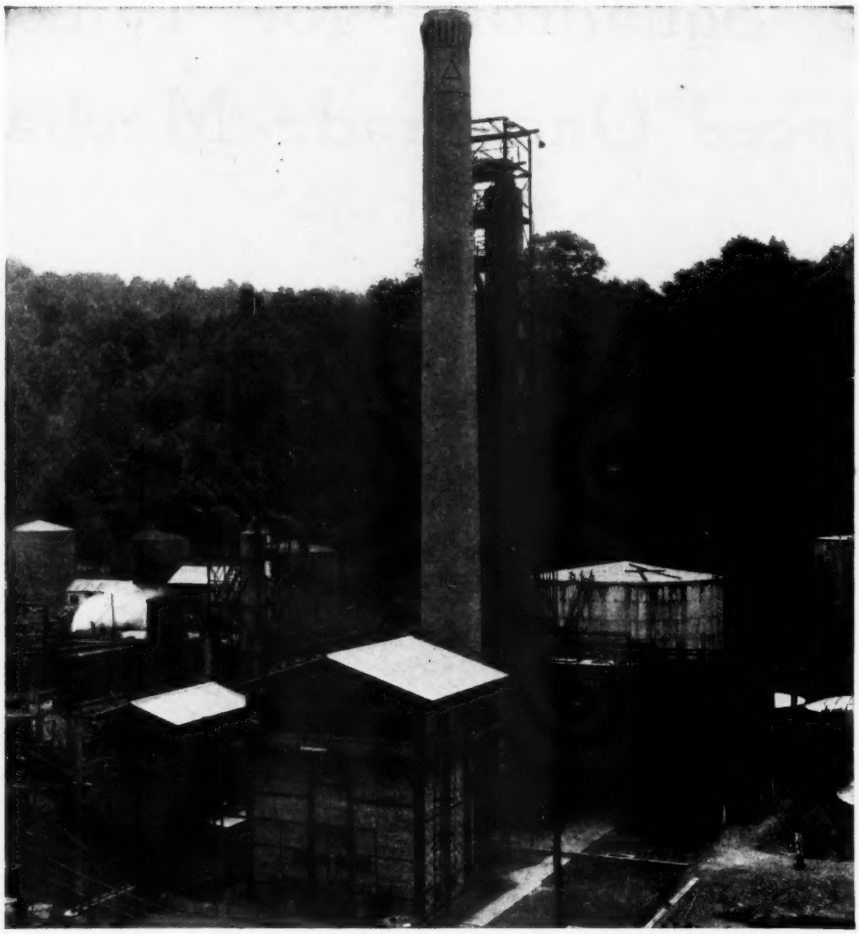
Plant Flying Squadron

(STATEMENT, October 28 — December 31, 1927.)

Date	Construction Order Number	Squadron Men and Wage	Mechanics Replaced and Wage	Hours Worked	APPRENTICE Saving per Hour	APPRENTICE Loss per Hour	APPRENTICE Saving Extended	APPRENTICE Loss Extended	SQUADRON Saving per hour	SQUADRON Loss per hour	SQUADRON Saving Extended	SQUADRON Loss Extended
Oct. 28	62413	1 S-.64 1 A-.50	1 M-.68 1 H-.49	9		.01		.09	.04		.34	
	63346	1 S-.64 1 A-.50	1 M-.68 1 H-.49	9		.01		.09	.04		.34	
	61424	1 S-.64 1 A-.50	1 M-.68 1 H-.49	9		.01		.09	.04		.34	
	61881	1 S-.64	1 M-.68	9					.04		.34	
	63085		1 H-.49						.49		4.17	
	63522 2828											
Oct. 29	6-100-1	1 S-.64 3 A-.50 2 S-.64	1 M-.68 3 H-.49 2 M-.68	4½		.03		.14	.04 .08		.18 .36	
Dec. 28	C-2930	4 S 4 A	4 M 4 H	9		(even)				(even)		
Dec. 29	(Rain)											
Dec. 30	C-2930	4 S 4 A	4 M 4 H	8½		(even)				(even)		
Dec. 31	C-2930	3 S-.64 4 A-.50	3 M-.68 4 H-.49	4½		.04		.18	.12		.54	
				Totals			$7.52	$15.20			$153.20	
								Net Saving			$145.52	

S—Graduate Squadron Men
A—Apprentice Squardron Men
M—Regular Mechanics
H—Regular Mechanics' Helpers

Section of a report on the saving obtained by using a flying squadron in refinery construction work



Refinery Operation Using Single Flash System

The complete refining plant, shown above, in the Pennsylvania district, has a rated capacity of 1800 barrels of crude per day.

The large Foster Wheeler fractionating tower at the right is designed for the continuous removal to specification of gasoline, naptha, kerosene, gas oil, wax distillate, overhead lubricating stock (540 deg. F. flash) and a heavy gravity cylinder stock bottom (640 deg. F.-650 deg. F. flash).

The small re-run unit shown at the left is designed to re-distill pressed wax distillate, recovering gas oil overhead, a 100 viscosity neutral oil side stream and a 200 viscosity bottom. This small unit also re-runs cylinder stock solution, recovering solution naptha overhead and cylinder stock bottoms. As a demonstration of further flexibility the unit re-runs pressure distillate, recovering end point gasoline overhead, a side stream of furnace distillate and gas oil bottoms. The simplified control of this unit enables the operator to switch from one cycle to another without shut down and with a minimum loss in time.

This refining plant was designed and erected by the Foster Wheeler Corporation. Further details upon request.

FOSTER WHEELER CORPORATION

165 Broadway, New York, N. Y.

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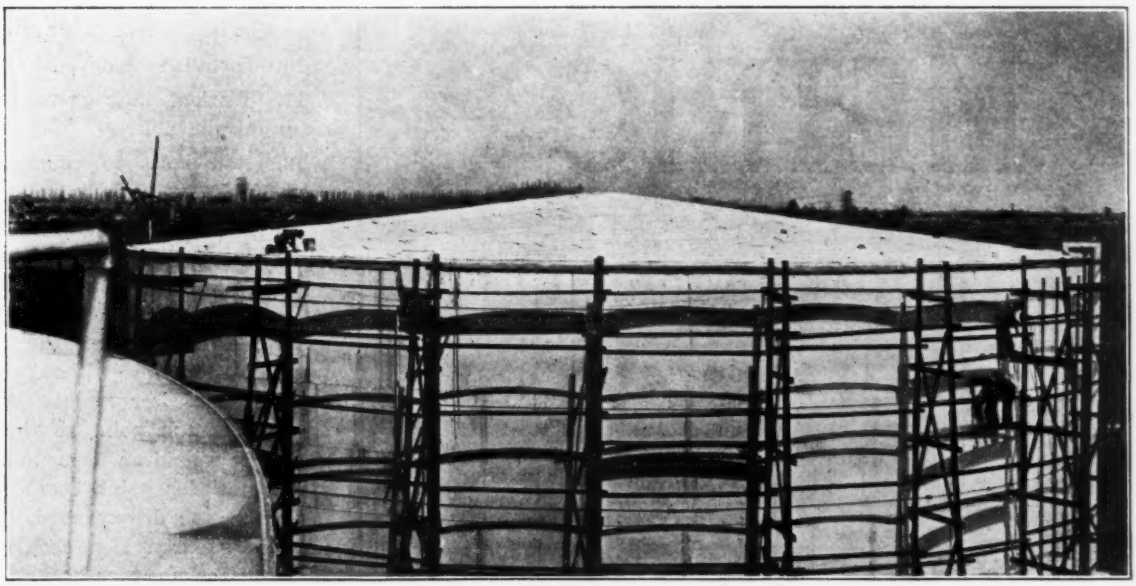
Foster Wheeler Limited, London, England.
Societe Anonyme Foster Wheeler, Paris, France.
Foster Wheeler Limited, Toronto—Montreal—Vancouver, Canada.

FOSTER WHEELER



A typical job for the Flying Squadron

until boilermakers have secured hoisted plates before raising more, pipefitters must wait until plates have been cut before tying in their lines or for the laborers to dig a conduit, even very small ones, before laying the pipelines.

Heads of construction departments realize that this necessary idleness boosts costs enormously. But what to do about it? To keep intermittent idlers on location is the lesser of two evils. The only alternative would be to send them to another job, perhaps at a distant part of the plant. Time is lost in going from one job to the other, and because of inability to estimate exactly the time required to complete a job, the workmen would seldom be available when needed. One very satisfactory remedy has been found in the organization of a specially trained group of men, aptly known as the "Flying Squadron."

There are other so-called "Flying Squadrons" in industry fulfilling other purposes; but for the conditions dealt with here the "Flying Squadron" is a group of mechanics with a multi-trade knowledge. For the building of steel tanks for the oil industry the mechanics composing this group know five trades: boilermaking, pipefitting, welding, rigging and carpentering. Mastery of these is gained only by an intensive and modern apprentice training program. Young men who have not been subjected to old-fashioned guild apprentice methods are the best raw material for this plan because they do not have ingrained in them the belief that to become an expert mechanic one should spend so many years as apprentice and so many as journeyman.

The war-time training developments of Charles R. Allen and those later improved industrial methods have proven conclusively that trades can be learned in a comparatively short time, if properly planned and taught. By a trade being "learned," it is meant that a mechanic reaches the degree of proficiency of a first class journeyman, although he should not be put at first on work requiring the fineness essential to some delicate operation. By intensive methods any trade used by the "Flying Squadron" can be taught to this degree of proficiency in approximately six months, depending upon plant conditions, and adherence to the principle when laying out the course, that the men should be trained strictly for the work they are to do. An average group of squadron men should complete their training in two years.

That the use of a plant flying squadron can be made a successful unit of refinery operation is proved conclusively by the results obtained by one of the largest oil companies in the United States, at one of their complete refineries. From the standpoint of reduction of indirect operating costs alone the flying squadron is undeniably valuable. The tabulated figures shown are a section of a typical report on the saving obtained by using squadron men (those who have finished the training course) and apprentice squadron men (those still in training) to replace regular mechanics and their helpers.

This report was made at a time of depression in the oil industry so it is a conservative indication of squadron possibilities. A further quotation from the report follows. ". . . 1. The figures are not inflated, being taken at an unfavorable time. 2. The squadron time to complete a job has always been as fast or faster than mechanics of one-craft accomplishment. Mr. ..... also maintains that if he could have gotten proper (1) work for the apprentices, they would now be doing work of labor higher priced than themselves. . . ."

During the two-month period for which the report is made the company lost $7.68 by using squadron men still in the course of training to replace regular mechanics' helpers, and saved $153.20 by using full-fledged squadron men to replace regular mechanics, a net saving of $145.52.

From the standpoint of providing an elastic working force the squadron is also worth consideration. This is especially evident when the working force has been cut to a skeleton. During the same straightened time mentioned above, while no tank construction was going forward, squadron men were used to fill in for first-class mechanics on any miscellaneous plant work requiring boilermaking, rigging, welding or pipefitting. Typical jobs in a week for one of them are enumerated below, taken from foremen's reports:

1. Welded 8-inch pipe to flanges to make nozzle.

2. Welded clips to angles, to hold fire brick in place of boilers.

3. Welded false bottom No. ..... tank and patched shell.

4. Burned patches for coke stills and cut bottoms out of same.

5. Heated pipe to be bent to template.

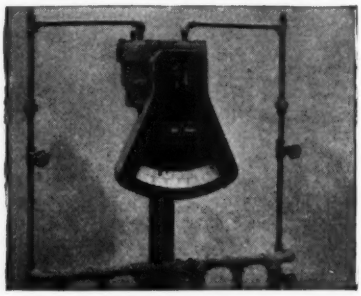
6. Cut tubes out of boiler at No. ..... Boiler House.

7. Riveted and caulked patch on tank.

8. Expanded tubes on No. ..... Stills.

Note: (1) Slack period lessened number of good construction jobs to be used in the training course.

METRIC



Indicating Flow Meter

WHERE doubt exists as to the flow through lines in refinery process work; where it would result in economy and better operating results to know constantly what the flow is—in fact, in almost every service where the knowledge of changes in the rate of flow is of importance, the Metric Indicating Flow Meter will tell you what the rate is.

The dial numbers are large enough to be seen from considerable distance, and they are graduated to read from zero to 10, or for any readings desired, in cubic feet, gallons, barrels, per minute, per hour, or per day.

Special Metric orifice discs are provided so that the indicators on the dial will show, without any calculations, the rate of flow, either with flange, or 2½ and 8 connection. Metric Indicating Flow Meters are therefore furnished according to specifications.

Important new applications for Flow Meters are being worked out constantly. Our advice and recommendations are always available without obligation. A survey of your plant may reveal many places where accurate flow registration will pay. *Ask us for suggestions.*

Sales Service: WESTCOTT & GREIS, Inc., Dallas, Los Angeles, Tulsa

METRIC METAL WORKS
of the American Meter Company-Inc.
- ERIE - PENNSYLVANIA - U-S-A -

VAPOR PHASE REFINING

WILL

Increase your gasoline yields,
Improve your gasoline quality,
and
Reduce your refining costs.

THE GRAY PROCESSES CORPORATION
961-975 Frelinghuysen Avenue
NEWARK, NEW JERSEY

9. Dug conduit and laid 6-inch pipe line at No. ..... Farm.

10. Installed steam drip.

11. Worked in riggers gang setting up gin pole.

12. Ran hoist to raise plates to roof of No. ..... Tank.

So valuable were squadron men in filling labor gaps during this recent period of depression that one general mechanical foreman said he could not have gotten the necessary work done on time without them. Of course, the writer realizes that there is a saturation point to the number of flying squadron men in any one plant. At this point, intensive training should be discontinued, and prospective squadron men should be carried on as helpers to full-fledged squadron men. In this way the available force is doubled and if expansion in the size of the refinery is contemplated, the training of the helpers can be finished off by a renewal of an intensive program.

Wilson to Head New Specialty Firm

R. A. Wilson

HOUSTON, Sept. 6.—Robert A. Wilson, formerly secretary and director of manufacturing in the Guiberson Corp., at Dallas, expects to announce shortly his plans for the formation of an oil country specialty firm to engage in the manufacturing branch of the industry. His resignation from the Guiberson Corp. was effective Sept. 1.

Mr. Wilson has been widely known in the petroleum industry because of his American Petroleum Institute standardization work and because of his connection with the Guiberson Corp. since its founding.

Railroad Right-of-Way Weeds Burned Off With Oil

By Allen S. James
N. P. N. STAFF WRITER

Staff Special
CONWAY, Ark., Sept. 6

OIL is now playing its part in keeping the right-of-way of the Missouri Pacific lines clear of weeds during the summer months, especially along the southern part of the road's territory. The oil is the fuel used in weed burners the company operates over its lines.

One of the weed burners was operated recently over the Central division, from Little Rock to Kansas City. Passengers riding on that division had no trouble in noting the effectiveness of the burner. There was no vegetation either between the rails or along either side, and in many places the weeds and grass had been burned entirely from the right-of-way from fence to fence.

Gas oil or distillate usually is used in the burners operated by the Missouri Pacific at the present time. The idea of burning the weeds originated several years ago with the late Superintendent Dean.

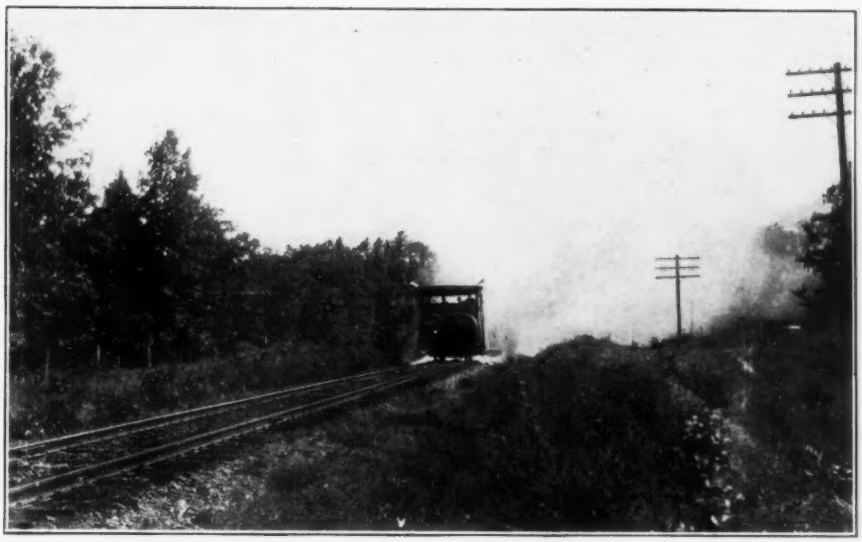
The first type of burner was built on an ordinary flat car, and used live steam, supplied from a locomotive which also provided the power. Large metal flanges hinged to the sides of the car were lowered just above the weeds when the burner was operated. During the winter months the burner was used to melt the snow from the tracks and portions of the platforms at the depots.

The present type of weed burner is built more compactly. On the front are mounted two large drums for fuel. The power is obtained from a four-cylinder Continental motor. The oil is forced through the burners with another smaller motor.

The burners are at the rear of the machine. They are so arranged that the flames cover the right-of-way to a distance of five or six feet on each side of the rails. The crew consists of an operator, a conductor and an assistant who controls the burners.

The machine is capable of burning along 15 to 18 miles of right-of-way in a day. It could make considerably better progress but for the fact that it has to lose a great deal of time going to and from side tracks to allow trains to pass.

Approximately 50 gallons of oil are required per mile. An 8,000 gallon tank car of oil, therefore, will burn approximately 160 miles of right-of-way. The cost of operation is approximately $100 a day. The cost per mile is approximately $7. The major portion of this cost is due to salaries.



Railroad right-of-way grass fires are prevented and a cleaner roadbed made possible with this weed burner operated by the Missouri Pacific lines. The burner uses gas oil or distillate

A crew of section hands is required when the machine is operated. The crew follows in the wake of the burner and extinguishes all cross-tie fires. The machine travels over the ties rapidly enough not to ignite the ties unless the wood is extremely dry, but the flames from the burners are sufficiently hot to cause small bunches of grass to burn. Many of these small bunches of grass grow against the ties and the fire ignites the ties. The section hands also prevent the grass fires from spreading beyond the road's right-of-way.

The supervised burning of the weeds from the roadbed minimizes the hazard of straggling fires being started from locomotives, with possible destruction of property. The roadbed after it has been burned presents a cleaner appearance. Before the weed burner was placed in operation much of the work of the sections crews in the summer months was devoted to cleaning the right-of-way and burning the weeds. The burner now does in a few hours what it formerly took the section crews several days to accomplish.

An accompanying picture shows flames shooting from each side and underneath the machine, and the heavy smoke hanging in its wake. The smoke can be seen rolling over the highway at the right of the picture.

PHILADELPHIA, Sept. 9.—The second edition of the Brown flow meter catalog is off the press for the Brown Instrument Co., containing 90 pages of data on the general theory, use, design and practical application of the flow meter, together with a detailed and well-illustrated description of the principle, construction and features of the Brown electric flow meter.

One of the advanced improvements in the design of this flow meter is the utilization of the inductance bridge principle by which motion is transmitted from the mercury float in the manometer to the receiving instruments, without passing wires or any mechanical transmission member through the pressure chamber wall. Other features are the mercury seal, the system of interchangeable range tubes, the automatic recording planimeter, and so on.

Ethyl and Army Engineers Join In Anti-Knock Fuel Tests

CLEVELAND, Sept. 5

IN AN effort to determine the exact anti-knock relations of various blends of motor fuel on both automobile and airplane engines, special tests have been started at the Detroit engineering laboratory of the Ethyl Gasoline Corp. and at Wright Field, Dayton, O. The army engineers and the Ethyl Gasoline Corp., owned jointly by General Motors and the Standard Oil Co. of New Jersey, will work in conjunction and will check each other on a number of blends of fuel.

Although the tests have been in operation for several months in Detroit, this is the first actual attempt to compare the fuels in this way. As a mechanical check at both places special knock testing machines which have recently been developed will be in operation.

The Detroit tests are being held at the General Motors proving grounds, 40 miles from the city, where two automobiles will be operated for several months by engineers from the Ethyl laboratory. One of the cars, according to Earl Bartholomew, director of the laboratory, will be a valve-in-head engine and the other an L head. Both are high compression engines.

Mr. Bartholomew said that considerable information should also be obtained as to the actions of automobile parts under the strain of high powered blends on long runs. This should determine to a great extent, he pointed out, the future of automobile parts, as the automobiles in the test will be put to a most exacting endurance test.

A special body of engineers from the laboratory have been appointed to work on the test exclusively both inside and outside. Inside the laboratory are four knock testing machines which have been so constructed that the exact knock producing effect is indicated momentarily. The engineers will try the blends in the automobiles and later make a like test from the same sample in the machine.

Mr. Bartholomew said the test may continue indefinitely until the proper reaction is found. The automobiles at the proving grounds are being run 8 hours a day at the rate of 50 miles per hour, on specially tested inclines and on level stretches. Thomas Midgley, discoverer of Ethyl motor fuel, is in charge of the testing staff of engineers.

Several special attachments are being used, including a fifth wheel speedometer, which is said to be more accurate than other types of speed taking devices. There are also thermometers to measure cooling water, oil and air. On the road the engineers listen for knocks with each change of fuel. Afterward the dial indicators of the knock testing machines are used as a check.

The test has been planned ahead for several weeks at the army aviation quarters at Wright Field, where considerable work is being done to determine a better blend of tetraethyl lead for airplanes. It is hoped by army engineers to arrive at a blend of Ethyl which will be two or three times the usual formula of three centimeters per gallon which is used for automobiles. Although many commercial planes are using this blend, military preparedness demands a motor fuel which will have the greatest possible power in proportion to its weight.

By these tests the army engineers hope to reach a greater lifting power and a fuel which will minimize the knocks of their higher compression engines. In time of war distances between fueling stations are of necessity very great and the fuel which has the greater power may be the difference between disaster and safety.

LOS ANGELES, Sept. 5.—William S. Waldrip, chief engineer of Neilan, Schumacher & Co., Los Angeles, manufacturer of regulating devices and control equipment, was in Chicago around Aug. 15 to establish J. M. Coffeen as sales representative for the company there. Mr. Coffeen has had several years in gasoline plant and instrument work.

Mr. Waldrip will also go to New York City to establish a sales representative there.

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written requests by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

40267.—**Petrolatum,** Monterrey, Mexico, purchase.
40252.—**Lubricating oils and kerosene,** Amoy, China, purchase and agency.
40253.—**Gasoline and other petroleum products,** Berlin, Germany, purchase.
40254.—**Petroleum** (unspecified) Glasgow, Scotland, purchase.
40288.—**Paraffin,** Neuchatel, Switzerland, purchase.
40326.—**Kerosene** in cases, Bridgetown, Barbados, agency.
40335.—**Paraffin,** Genoa, Italy, agency.
40338.—**Paraffin,** Hamburg, Germany, agency.
40363.—**Fuel oil for cracking,** Genoa, Italy, agency.
40425.—**Paraffin,** Hamburg, Germany, agency.
40524.—**Cutting and cooling oils,** Ludwigsburg, Germany, purchase.
40529.—**Cylinder and machine oils and white petroleum,** Prague, Czechoslovakia, purchase.
40207, **Petrolatum,** Monterrey, Mexico, purchase.
40252, **Lubricating oils, Kerosene, etc.,** Amoy, China, both.
40253, **Gasoline and other petroleum products,** Berlin, Germany, purchase.
40254, **Petroleum,** Glasgow, Scotland, purchase.
40288, **Paraffin,** Neuchatel, Switzerland, purchase.
40326, **Kerosene in 5-gallon cans,** Bridgetown, Barbados, agency.
40335, **Paraffin,** Genoa, Italy, agency.
40338, **Paraffin,** Hamburg, Germany, agency.
40363, **Fuel oil, bunker, for cracking,** Genoa, Italy, agency.
40550—**Paraffin,** Medellin, Colombia, agency.
40607.—**Gasoline, kerosene, fuel oil, and crude petroleum,** London, England, purchase.

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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

FORMULATION, establishment and acceptance by the trade of a uniform method of taking temperature of gasoline and other petroleum products in tank cars as a basis for computing volume corrections appears to be one of the most useful services that could be rendered to the refining and marketing branches of the industry.

Undoubtedly the American Petroleum Institute committee that is working on the development of such a method will come forth in due time with a standard procedure which will fill the need.

A canvass of a number of companies as to their methods of taking temperature in loading and unloading tank cars was published in last week's NATIONAL PETROLEUM NEWS. This showed a wide variety of prescribed methods of carrying out this operation.

Aside from the possibilities of error which arise from the shipper using one method of measurement and the consignee another, is the wide field opened up for mistakes by such directions as these, which are taken verbatim from some of the printed instruction books sent out by refining companies to their bulk station employes: "Temperatures should be taken near the bottom, the middle and the top of the gasoline in the car": "* * *in the center of the liquid" "* * *3½ feet from the bottom of the car* * *" and many other such expressions which are susceptible of varying interpretations by men working on the loading rack or at the bulk station.

It is interesting to note that more than one of the large refining and marketing companies make no volume corrections for temperature at all. The refinery simply charges the bulk station with a shell-full car. While changes in volume would occur at times due to differences in temperature at which the car was loaded and unloaded, it is to be wondered whether over a year's time, such a method would not serve as well as any other.

It seems probable that the outages and overages over the year would about cancel. Of course, such a policy would be impossible where gasoline was shipped from the refinery to outside customers.

* * *

LUIS de FLOREZ of New York, well known to refiners as the developer of a vapor phase cracking process for the Gulf Refining Co. and The Texas Co. as well as the inventor of the de Florez vertical tube still and a temperature control device for cracking stills, has been spending a few weeks abroad.

Mr. de Florez sailed from New York on the Paris Aug. 2 on a combined business and pleasure trip. He proposed to renew many friendships he made among British oil technologists during the war when he was associated with William A. Hall in the development of a process for the manufacture of toluol for war purposes. He expected also to spend some time in France.

Probably he did considerable "visiting around the refineries" while he was in Europe. He was to sail for home on the Majestic Sept. 4.

ALTHOUGH heat exchanger design and heat exchanger practice for refineries has been apparently pretty well standardized, the subject is being opened up again recently. New possibilities of saving are being brought to light.

An engineer who specializes in heat exchange problems tells me that in a certain cracking plant a saving in fuel amounting to $25,000 per year per unit was effected by interposing a series of high pressure heat exchangers in the system between the tank for accumulating the feed, and the cracking coils.

These cracking units run about 5000 barrels a day of charging stock each, operating under 900 pounds pressure or higher.

Heat exchangers like other refinery equipment are being built nowadays to withstand working pressures that were considered absolutely impossible a few years ago.

* * *

REFINERS marketing Ethyl gasoline will not all be affected exactly alike by the newest revision in the rules of the Ethyl Gasoline Corp. whereby the anti-knock rating of the Ethyl standard is raised.

The new rule raises the anti-knock value of the Ethyl standard by ¼ of a cubic centimeter of Ethyl fluid to the gallon.

Refiners are required to meet this new standard with the Ethyl gasoline they sell but they are not required arbitrarily to add ¼ cubic centimeter of Ethyl fluid to their fuel if they can meet the requirement with less.

The situation will continue about as it is now, that is, some refiners can meet the prescribed standard with less Ethyl fluid and some must use more, according to the crude they run, method of cracking and so forth.

* * *

I WAS told recently that one of the companies that for years has been selling fuller's earth to refiners for filtering their oils by percolation, has suffered a serious loss in business during the past couple of years because the advance in the art of clay roasting has made it possible for the refiner to use his fuller's earth 20 or 30 times or more before discarding it.

Use of multiple hearth furnaces for roasting the used filtering medium means of course considerably less buying of new clay by lubricating oil refiners.

* * *

BETTER fractionation of gas oil to be used for cracking stock seems to be more and more the rule among refiners. It is found that if the oil is carefully fractionated the tarry matter, asphalt and so forth can be largely dropped out before the stock goes into the cracking zone and thus the formation of coke is prevented or much reduced.

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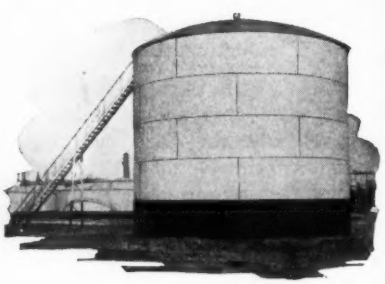

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"Preserv-O-Wax" No. 284,111. The Cities Service Oil Co., Cleveland, Ohio. For refined paraffin wax.

"Motor A" No. 284,671. William A. Carran, Cleveland, Ohio. For lubricating oils.

"Frees-All" No. 282,657. Arthur Larkins, Cleveland, Ohio. For rust-penetrating and lubricating oils.

"CITIES SERVICE OILS ONCE ALWAYS" No. 278,636. The Cities Service Oil Co., Cleveland, Ohio. For lubricating oils.

"Ram" No. 275,820. Bennett Pumps Corp., Muskegon, Mich. For combined lubricant receptacle and nonmeasuring pump.

"Amovis" No. 285,005. American Oil & Supply Co., Newark, N. J. For lubricants in oil and grease form.

"Motul" No. 284,648. Swan-Finch Oil Corp., New York, N. Y. For lubricating greases.

"Stellarene" No. 267,659. The Leamon Process Co., Newark, Ohio. For motor-fuel oils.

"Rainbow" No. 278,858. True's Oil Co., Spokane, Wash. For gasoline, kerosene, benzine, naphtha, lubricating oils and greases, and fuel oils.

"H. D." No. 285,603. The Standard Oil Co., Cleveland, Ohio. For lubricating oils and greases.

"750" No. 285,602. The Standard Oil Co., Cleveland, Ohio. For lubricating oils and greases.

Mileage "For Wise Drivers" and picture of owl. Ser. No. 284,431. Warner-Quinlan Co., New York, N. Y. For lubricating oil and gasoline.

"Koral Products Autosesries Hardware Specialties" No. 268,452. Ben Koral Co., Chicago, Ill. For grease guns and oil guns, can openers, egg beaters, drain plungers, air pumps.

"S. H." No. 285,604. The Standard Oil Co., Cleveland, Ohio. For lubricating oils and greases.

"S. R." No. 285,605. The Standard Oil Co., Cleveland, Ohio. For lubricating oils and greases.

"H. T." No. 285,598. The Standard Oil Co., Cleveland, Ohio. For lubricating oils and greases.

"Aquanon" No. 285,600. The Standard Oil Co., Cleveland, Ohio. For transformer oils and compounds.

"C. M." No. 285,601. The Standard Oil Co., Cleveland, Ohio. For lubricating oils and greases.

"K. S." No. 283,355. Karl M. Steinmetz, Philadelphia, Pa. For penetrating and lubricating oils.

Combustion

and power generation in refineries—28 articles in the past year have been published in National Petroleum News on this one angle of refinery operation.

Here they are for your file reference:

1929

Vertical tube still has 70% efficiency Apr. 24, p. 75
How modern boiler plant increases efficiency Feb. 20, p. 57
Boiler plant burns acid sludge Jan. 16, p. 65

1928

Coke or acid sludge can be used for steam Oct. 24, p. 64
Recent developments in refinery combustion Oct. 17, p. 57
Quick action cuts loss when pipe still fails Oct. 3, p. 61
Refinery power plant gives 1 kw. per 9.4 lbs. steam per hour Oct. 3, p. 68
Cost of heat is what refiners should know Sept. 26, p. 78
Heat conserved with better fractionating equipment Sept. 26, p. 91
How a refinery cut costs to less than half Sept. 19, p. 22
Cut in refining losses offers profits June 20, p. 92
Cuts costs and loss by circulating systems June 20, p. 28
Refinery saves $80,000 yearly with auxiliaries June 6, p. 32
Fuels shell stills with powdered coke June 6, p. 25
Cutting costs in steam raising May 16, p. 49; May 9, p. 49; May 2, p. 17
New distilling equipment makes demands on refractories May 9, p. 76
Halves fuel costs with old shell still May 2, p. 81
Pipe still economy in making Penna. lubes May 2, p. 56
Efficient firing cuts fuel costs 1/3 Apr. 25, p. 63
New device to burn sludge coke Mar. 7, p. 101
Shell still as a big volume distilling unit Mar. 7, p. 60; Feb. 29, p. 63
Pipe still-tower can fit many purposes Feb. 29, p. 97
A.I.M.E. discusses combustion Feb. 29, p. 21
Screened radiant heat in refining Feb. 22, p. 70
Increasing still capacity without capital Jan. 25, p. 73

The above list of articles is for your convenience in locating them in your file.

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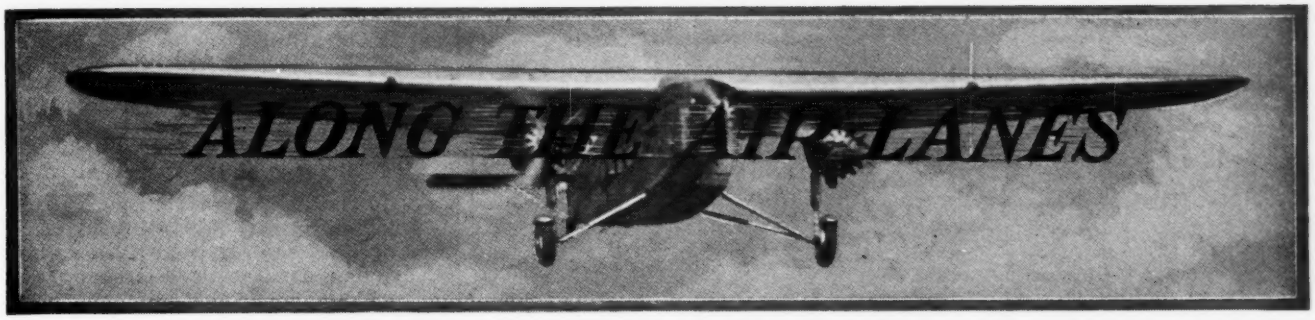


Trailers Effective in Fueling Racers

By Roger B. Stafford
N. P. N. STAFF WRITER

THE semi-trailer tank truck, introduced this week into the field of fueling aircraft, deported itself in a manner that was greatly pleasing to A. W. Kennerson, director of the motor transport division of the Standard Oil Co. of Ohio, who was in charge of fueling operations at the National Air Races.

The Standard used 11 semi-trailer tanks in serving most of the approximately 1000 airplanes and airships that participated in or attended the National races.

"The semi-trailer tank demonstrated its flexibility and maneuverability in a wonderful way," Mr. Kennerson said. "The trucks were speedy over the rough spots of the flying field, were able to drive among the planes with remarkable ease, and were turned around in a much smaller area than a two-ton truck which would have been required to carry the load the semi-trailers carried."

The Standard of Ohio supplied all the contestants and army and navy planes with gasoline. It also refueled the Los Angeles, the navy's great dirigible, and the new all-metal dirigible ZMC-2. Its trucks also supplied many of the private planes which were quartered at the numerous hangars at the Cleveland Airport.

Trucks with aviation gasoline were also at the port from The Texas Co., the Richfield Oil Co., and Shell Petroleum Co. The Refiners Oil Co., Ohio distributors of the new Stanavo aircraft oil, had a stake truck serving this oil. The Naturaline Co. maintained a supply of its aircraft fuel at one of the hangars.

The Standard used 14 pieces of equipment in servicing the racing and other planes. These 14 pieces were ten 750-gallon Davis and Heil tanks on Fruehauf semi-trailers drawn by GMC and Indiana 1½-ton truck tractors. One 1000-gallon semi-trailer tank, one four wheel trailer of 1800 gallons capacity which was used as a portable bulk station; one eight-barrel stake truck for motor oil, and one emergency truck equipped with winch, tools, fire extinguishers, and lines.

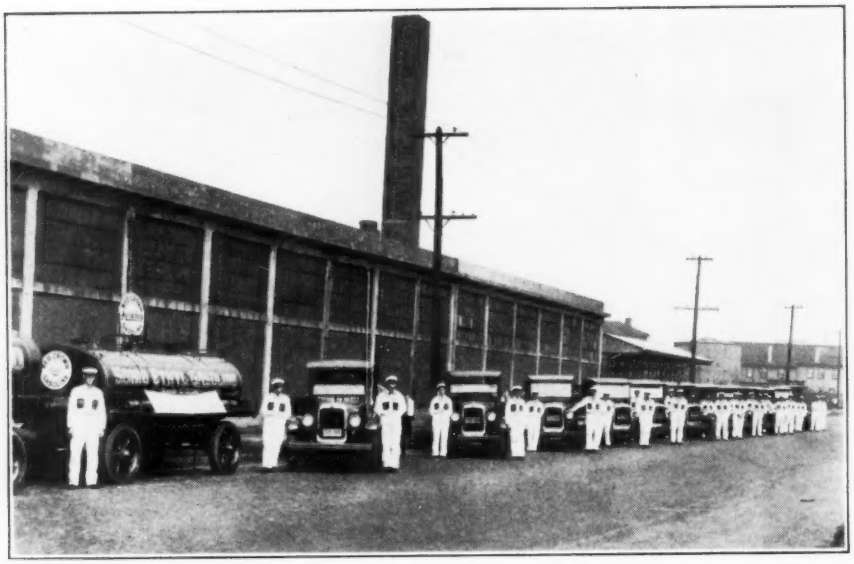
The Standard built its own pumping equipment on the semi-trailer tanks. This equipment consisted of a hand operated, double action reciprocating pump mounted on the right can rack. The gasoline was drawn through the faucets into a special manifold made of standard pipe fittings. A large hose was connected at one end to the manifold and at the other end to the pump. A long section of gasoline hose led to the pinch valve nozzles. In the case of the blimps and the Los Angeles, several long sections were required to reach the fuel intakes.

The company equipped its drivers and other service men at the port with white uniforms with red breast and hip pockets and blue belts and collars—carrying out the company's red, white, and blue color scheme.

At the opening of the air races Aug. 24, the company had a parade of the gasoline trucks from its refinery in Cleveland to the airport. The parade was led by "Big Bertha" with trailer. "Big Bertha" is a semi-trailer with 2711-gallon tank and a four-wheel trailer with 1800-gallon tank, making a pay load of 4511 gallons. This piece of equipment which is used in the regular service station service in Cleveland is pulled by a White truck tractor.

During the week the smaller semi-trailer units loaded in the morning at the refinery and went

Fueling the planes of the "High Hats" squadron from the San Diego naval base at the National Air Races. The ships in the air are military planes. The semi-trailer tank truck is one of 11 such units used at the races by the Standard Oil Co. of Ohio. This job is a GMC tractor, Fruehauf semi-trailer and Davis tank



Standard of Ohio fleet of semi-trailer tanks ready to start from the refinery to the Cleveland Airport for the National Air Races

to the airport returning to the refinery when the gasoline was depleted or in an emergency drawing on the portable "bulk station" for a supply.

Some of the trucks were equipped with meters between the pump and the gasoline outlet hose. These trucks were used in fueling non-contestant planes. The plane owners paid 26 cents a gallon for the gasoline, which was domestic grade aviation motor fuel. No meters were on the trucks used to fuel the contestant, army and navy planes, the Standard supplying them with fuel without cost as its contribution to making the National Air Races in Cleveland a success.

Richfield Oil Co. of California had a dressy special aircraft service truck which made its debut in Cleveland. The truck is the only one of its kind and was built in Los Angeles on a White 58 chassis.

This Richfield outfit carries 1127 gallons of gasoline, 50 gallons of oil in two rectangular tanks on the right can board and has an air compressor for inflating landing gear tires.

The unit cost $17,000, according to the White Co. Gasoline is discharged by means of an electrically driven centrifugal pump through a meter and wet hose. The pump control is a push-button at the rear of the right can rack and the gasoline is by-passed around the pump and back of the meter when the nozzle is closed.

Electricity for the pumps comes from 24 Edison storage cells which are independent of the truck's batteries. These Edison cells are charged by a Pullman type Westinghouse generator which is driven through a power take-off by the truck's engine. An automatic device cuts off the charge when the desired maximum has been reached.

The truck also has an auxiliary hand operated rotary pump for discharging the gasoline in an emergency. The oil is discharged through faucets at the rear of the right can rack in which also are the meters for the gasoline and oil.

The electrically driven pump is suspended under the right can rack just in front of the rear dual wheels.

It is the plan of the Richfield company to operate the truck out of Los Angeles wherever there is a call for aviation gasoline or where any aviation meeting is held.

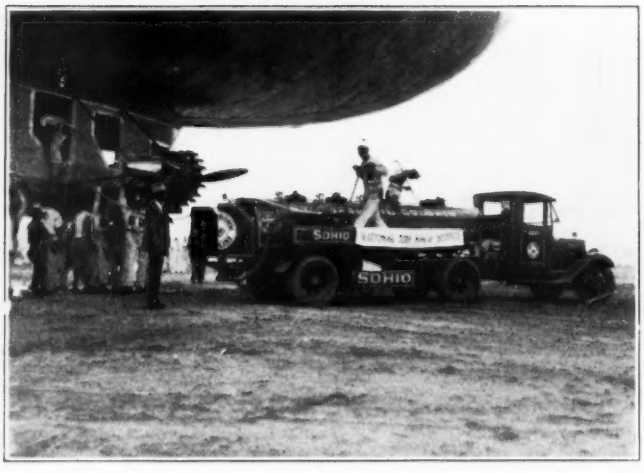
A feature is the use of an air sock which may be attached to a 15-foot telescopic staff which can be mounted on the roof of the all-metal cab.

At the National Air Races the truck was in charge of "Richfield Red" (E. R. Woods) who is a familiar figure in California airports. "Red" confesses to fueling the planes of the Dole trans-Pacific fliers, the Question Mark and Angeleno on their endurance flights, Art Goebel, Tucker and Collier, Bobbie Trout, and Herb Fahy on his two solo endurance flights, besides planes of other prominent figures in the air world.

The truck is painted in dark blue and cream, the Richfield colors, and was expressed to Cleveland for the races.

The Texas Co. had at the field a Diamond T six-wheel job with a 1056-gallon tank, which was used to service the company's four planes at the races, the Spokane Sun-God which made a non-stop flight from Spokane to New York and return two weeks ago, and other users of the company's products. Gasoline was pumped by hand from the top of the tank to the planes.

CLEVELAND, Sept. 5. — All Travelair planes attending the 1929 National Air Races were fueled with Union Oil Co. of California gasoline and oil. The company itself brought two planes to the races from Los Angeles, where its headquarters are.



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Most Heating Distillate Contracts Based on Spot Market Prices

By Allen S. James
N. P. N. STAFF WRITER

Staff Special
TULSA, Sept. 5

THE majority of heating distillate contracts which have been written by Oklahoma and Kansas refiners for the season of 1929-1930 will be based on the spot market date of shipment. Few flat price contracts have been written to date.

Some of the contracts already signed carry minimum and maximum stops, while others carry a maximum but do not provide a minimum. Those with stop clauses for the most part provide a minimum of 3.50 cents and a maximum of 4 to 4.50 cents.

One large company which has specialized on a uniform, treated product for home consumption, will obtain the average price shown in three market publications, plus 0.25 cent a gallon, but the contracts carry a minimum of 3.50 and a maximum of 4.25 cents a gallon.

The stops in the contracts do not quite cover the range of the 38-40 straw distillate market in Oklahoma the last three years, both with reference to average prices by months and the average price by years, as will be observed in the following tabulation.

Month	1927	1928	1929
Jan.	5.213	3.313	3.206
Feb.	4.766	3.250	4.094
March	4.031	3.125	4.188
Apr.	3.250	3.063	3.725
May	3.225	3.063	3.375
June	3.219	3.031	3.375
July	3.359	2.938	3.500
Aug.	3.275	3.031	
Sept.	3.188	3.297	
Oct.	3.238	3.363	
Nov.	3.297	3.438	
Dec.	3.313	3.513	
Yr. Avg.	3.615	3.202	

Distillates this year seem to have been given only passing interest both by refiners and buyers. The company referred to before which makes a uniformly good product by treating the oil for odor and color, has withdrawn from the market because it now has contracts sufficient to take care of its estimated production for the season.

Another large company has withdrawn from the market both for spot and contract shipments apparently to follow a storage program until the seasonal demand develops sufficiently to stimulate prices. Others are understood to have adopted virtually the same policy, with the season now not far removed.

Many companies have made no effort to contract their production this season, and have indicated they will take their chances on the spot market. A few of this number have made contracts in past years, while one or two others have not had the policy of contracting for the past three or four years.

The sales manager of one of the larger companies that has depended on the spot market the last two or three years, declared recently that the company's contracts invariably worked to a disadvantage for the refiner. This company last season had a large quantity in storage and did not make any great effort to move the goods until late in January. From the foregoing table it will be seen that when the company did begin to sell it obtained the top of the market during February, March and April. It must be kept in mind, however, that last winter was an exceptionally severe one, which may account for the fact that the company was able to dispose of its stocks on such a basis.

One of the larger distillate distributors in one of the largest distillate consuming cities in the Middle West informed the writer this week that in his opinion the large buyers of distillates were going to take their chances on the spot market this season. He said his conversations with other buyers developed almost invariably the opinion that prices were too high at present in the face of the talk about possible crude revisions, and only a small amount of buying had been done for storage, either on the spot market or on contract shipments.

This buyer said he had observed a large number of burner installations for recycle gas oil this summer, and he believed that commodity would obtain a better play than ever before. The use of gas oil, he said, would save the average consumer between $50 and $75 a year.

Another factor which he has had to take into consideration in his territory, is the gas companies. He said many gravity feed burners which had not been giving proper combustion, and with which some users had had considerable trouble, had been removed and the gas companies had been making a vigorous drive to show the consumer where he could save a little on his fuel bill by burning gas. Many of the gravity feed burners have been replaced by gas burners, the company installing the burner for around $125 and giving the consumer "the rest of his life" in which to pay for it.

A check of distillate production and shipments for the years 1927, 1928 and to date in 1929, as shown in the weekly operations reports of a majority of refiners in Kansas and Oklahoma who report to NATIONAL PETROLEUM NEWS, has revealed some interesting facts.

Cumulative production and shipments by weeks for the periods named are shown in Table No. 1. Included also in the table is the average price for 38-40 straw distillate in Oklahoma (Group 3) for various periods. These prices for the most part are those which prevailed around the first of each month. The date the price was effective is shown in parenthesis below each price.

IN THE column under 1927 it will be observed that cumulative shipments from the first week until the thirty-first week were ahead of cumulative production for the same period. The thirty-first week was the first one in August. From that time until the end of the year production was ahead of shipments. At the end of 1927 the Kansas and Oklahoma refiners had in storage 8,128,000 gallons. On Sept. 30 of that year they had in storage almost 12,500,000 gallons.

Cumulative shipments kept ahead of cumulative production throughout 1928, but the price trend through 1927 and well into August, 1928, was downward. It will be observed that cumulative production in 1927 was 14,700,000 gallons more than for 1928, while shipments in 1927 were 10,400,000 gallons more than in 1928.

This may be accounted for, in part, by the fact that in the fall of 1927 and the spring of 1928 there was a big demand for the zero straw gas oil manufactured in north Louisiana. The refiners in that district enjoyed a good business, and the product was sold extensively in northern markets for a low gravity

Table No. 1

Cumulative Production and Shipments of Distillate in Kansas and Oklahoma from 1927 to Date (By Weeks and Years) Together with Average Price for 38-40 Straw Distillate in Oklahoma (Group 3) at Certain Stages in the Cumulative Table

(Figures based on refinery operations reports from Kansas and Oklahoma refiners as reported to NATIONAL PETROLEUM NEWS. Volume figures are in thousands of gallons. Prices are in cents per gallon. Figures in parentheses below each price is date price was in effect.)

	1927			1928			1929		
	Prod.	Ship.	Price	Prod.	Ship.	Price	Prod.	Ship.	Price
1st Week	1,669	1,860	5.375	782	2,207	3.313	829	902	3.563
2nd Week	3,109	3,883	(1-3)	1,966	4,463	**(1-3)	1,652	2,613	**(12-31)
3rd Week	4,837	6,366	.....	2,756	5,946	.....	2,864	3,951	.....
4th Week	6,292	8,487	.....	3,820	7,135	.....	4,309	5,472	.....
5th Week	7,804	10,491	.....	4,877	8,310	.....	5,786	7,275	.....
6th Week	8,908	11,605	4.938	5,985	9,586	3.313	7,320	8,928	3.875
7th Week	10,141	13,113	(2-7)	6,900	10,712	(2-6)	8,394	10,564	(2-4)
8th Week	11,521	14,349	.....	8,017	11,729	.....	9,506	12,080	.....
9th Week	12,848	15,482	.....	8,873	12,980	.....	10,737	13,343	.....
10th Week	14,469	16,895	4.500	9,762	13,516	3.125	12,015	14,366	4.375
11th Week	16,059	17,948	(3-7)	10,671	14,773	(3-5)	13,142	15,143	(3-4)
12th Week	17,380	18,981	.....	11,562	15,904	.....	14,221	15,859	.....
13th Week	18,395	19,975	.....	12,366	16,565	.....	15,443	16,630	.....
14th Week	19,355	20,972	3.375	12,997	17,222	3.063	16,716	17,501	4.000
15th Week	20,109	22,004	(4-4)	13,484	17,742	(4-2)	17,321	17,948	(4-1)
16th Week	21,142	23,040	.....	14,093	18,593	.....	17,804	18,239	.....
17th Week	21,858	23,836	.....	14,659	19,424	.....	18,516	18,724	.....
18th Week	22,405	24,462	3.188	15,329	20,228	.....	19,270	19,302	.....
19th Week	22,917	25,095	(5-2)	15,996	20,436	3.063	19,962	19,987	4.438
20th Week	23,460	25,575	.....	16,341	20,989	(5-7)	20,661	20,813	(5-6)
21st Week	24,080	26,056	.....	16,910	21,302	.....	21,381	21,299	.....
22nd Week	24,661	26,444	.....	17,483	21,573	.....	22,211	21,676	.....
23rd Week	25,041	27,104	3.250	18,187	22,377	3.063	23,083	22,806	3.375
24th Week	25,677	27,818	(6-6)	18,959	22,901	(6-4)	24,144	23,408	(6-3)
25th Week	26,529	28,515	.....	19,784	23,749	.....	24,885	24,277	.....
26th Week	27,458	29,237	.....	20,286	24,221	.....	25,519	24,724	.....
27th Week	28,309	29,894	3.313	20,781	24,574	2,937	26,364	25,043	3.375
28th Week	29,138	30,177	(7-5)	21,435	25,049	(7-2)	27,588	25,412	(7-1)
29th Week	30,224	30,801	.....	22,063	25,526	.....	28,538	25,989	.....
30th Week	30,873	31,345	.....	22,809	26,210	.....	29,250	26,793	.....
31st Week	31,675	31,894	3.375	23,361	26,797	.....	30,051	27,875	.....
32nd Week	33,182	32,358	(8-1)	23,937	27,097	2.937	31,071	28,752	3.625
33rd Week	35,292	32,974	.....	24,424	27,256	(8-6)	31,791	29,539	(8-5)
34th Week	36,542	33,593	.....	24,806	27,642	.....	32,506	30,506	.....
35th Week	37,625	34,459	.....	25,600	28,293	.....			
36th Week	39,013	35,352	3.188	26,168	29,051	3.250			
37th Week	40,271	36,019	(9-6)	26,938	29,742	(9-4)			
38th Week	41,489	36,851	.....	27,898	30,794	.....			
39th Week	42,805	38,299	.....	28,954	31,694	.....			
40th Week	44,211	39,914	3.188	29,886	32,572	3.133			
41st Week	45,474	42,029	(10-3)	30,568	33,757	(10-1)			
42nd Week	46,871	42,569	.....	32,016	34,251	.....			
43rd Week	47,923	43,234	.....	33,133	35,145	.....			
44th Week	49,083	43,878	.....	34,294	36,063	.....			
45th Week	49,955	45,474	3.250	35,039	37,239	3.438			
46th Week	50,861	46,584	(11-7)	35,920	38,187	(11-5)			
47th Week	51,774	47,765	.....	36,697	39,026	.....			
48th Week	52,752	48,965	.....	37,604	39,960	.....			
49th Week	53,425	50,676	3.313	38,325	41,349	3.438			
50th Week	54,034	52,366	(12-5)	39,368	42,806	(12-3)			
51st Week	55,074	54,051	.....	40,411	43,836	.....			
52nd Week	56,033	55,374	.....	41,324	44,878	.....			

distillate suitable for home burner consumption.

At the end of 1928 the Kansas and Oklahoma refiners had reduced distillate stocks almost half. Their stocks Dec. 26, 1928, totaled only 4,574,000 gallons as compared with the 8,000,000 gallons at the same time in 1927. The severe winter the first of 1929 pulled stocks down still further, with these refiners on March 29 having only 3,300,000 gallons in storage.

The column for 1928 shows that shipments continued to outdistance production until the twenty-first week, although there were several weeks when shipments and production were almost on a balance. At the end of the thirty-fourth week, 1929 shipments were almost 3,000,000 gallons more than those for the same week in 1928 and about the same amount less than those for the period in 1927. Production for that week in 1929 was 7,700,000 gallons above the figure for 1928 but 4,000,000 gallons under the 1927 figure for the thirty-fourth week.

These facts are shown more clearly in Table No. 2, which gives the percentage change in shipments and production each fourth week for the years under discussion. Production in 1928 was steadily under that of 1927, the percentage ranging from 16.4 to 53.1. Shipments were from 15.9 to 19.3 per cent lower in 1928 than they were in 1927, except for the first week.

Production to date in 1929 has been steadily higher than for the corresponding period in 1928, the range being from 12.8 to 29.8 per cent. Shipments meanwhile have fluctuated widely, from a loss of 59.1 per cent the first week to an increase of 6.1 per cent the thirty-second week.

A comparison of the production and shipments figures for 1927 and 1929 reveals that 1929 production has been from 5.4 to 50.3 per cent less than that of 1927, while shipments have been from 11.1 to 55.5 per cent less.

Table No. 2

Percentage Changes in Production and Shipments of Distillates from Kansas and Oklahoma Refineries for the Years 1927, 1928 and to Date in 1929, Percentages Being Computed for Each Fourth Week.

(Percentages computed from cumulative shipments and production shown in Table No. 1.)

Week Ended Month	Day '27	Day '28	Day '29	1928 over 1927 Prod.	1928 over 1927 Ship.	1929 over 1928 Prod.	1929 over 1928 Ship.	1929 over 1927 Prod.	1929 over 1927 Ship.
1st Week .....Jan.	7	6	4	—53.1	+18.6	+13.8	—59.1	—50.3	—55.5
4th Week .....Jan.	28	27	25	—39.3	—15.9	+12.8	—23.3	—31.5	—35.5
8th Week .....Feb.	26	24	22	—30.4	—18.3	+18.6	+ 3.0	—17.5	—15.8
12th Week .....Mar.	25	23	22	—33.5	—16.2	+23.0	— 0.3	—18.2	—16.4
16th Week .....Apr.	22	20	19	—33.3	—19.3	+26.4	— 1.9	—15.8	—20.8
20th Week .....May	20	18	17	—30.3	—17.9	+26.4	— 0.8	—11.9	—18.6
24th Week .....June	17	15	14	—26.2	—17.7	+27.3	+ 2.2	— 6.0	—15.9
28th Week .....July	15	13	12	—16.4	—17.0	+28.7	+ 1.3	— 5.4	—15.8
32nd Week .....Aug.	12	10	9	—27.9	—16.4	+29.8	+ 6.1	— 6.4	—11.1
36th Week .....Sept.	9	7	....	—32.9	—17.8				
40th Week .....Oct.	7	5	....	—32.4	—18.4				
44th Week .....Nov.	4	2	....	—30.1	—17.8				
48th Week .....Dec.	2	30	....	—28.7	—19.0				

The station of Conklin & Sons where free powder puffs are provided in ladies rest room. The rest room floor is of tile

Free Powder Puffs Attract Woman Patronage

By E. L. Barringer
N. P. N. STAFF WRITER

CHICAGO, Aug. 24

FREE powder puffs made from cotton batting are used to attract woman patrons to service stations operated in and around Madison, Wis., by Conklin & Sons, Madison jobbers.

Favorable comment has been made by women customers to the company that this service coupled with clean rest rooms was bringing them to the stations. The cotton batting does not cling to the face, and makes an inexpensive, satisfactory puff to distribute.

The cotton is purchased in local drug stores, one roll at a time, and cut into squares of two and a half to three inches. These are placed in a large glass bowl with a cover. Free powder is provided also. Only one grade is carried at one time, the company purchasing a different make each time.

Powder and puffs are placed on the shelf and there is a sign inviting patrons to use the service. A receptacle is provided for used puffs.

J. B. Conklin, a member of the company, advises fastening the powder box and puff jar securely to the shelf. Experience has taught the company that both are taken away unless nailed down.

Free cigarettes are provided for lady patrons also. One package of any popular brand with matches and an ash tray on the shelf. Curtains are placed at all rest room windows. The outer rest room has a large table where patrons may place packages and pocket books.

Clean rest rooms are provided by having the attendant clean the rooms after each patron. When business at the station is brisk such service is not possible to maintain, but whenever the attendant is free he has been instructed to clean the rooms.

All fixtures are cleaned after each patron, and the floor is mopped up. This feature has brought much favorable comment from patrons, one party saying that the rooms were the cleanest found in 3000 miles of travel. Near the station drive is a sign advertising the facilities as "Sanitary rest rooms."

The company has found tile floors the eaiest to keep clean, Mr. Conklin said. The attendant spends less time in cleaning this type of floor and it also makes a neater appearance when mopped up.

Cost of a modern, attractive toilet room is about $50 more than an ordinary room, the company estimates. This additional outlay does not provide an elaborate service, but allows for the purchasing of attractive fittings and good walls and floors.

New Stations Building

Atlanta, Ga.—J. L. Carroll Tire Co., service station.

Vernon, Tex.—Vernon Chamber of Commerce airport, service station.

Pueblo, Colo.—Midwest Refining Co., service station.

Wooster, O.—Texas Co., service station.

Burkesville, Ky.—Stoll Oil & Refining Co., filling station.

Miami, Fla.—John C. Bilford, filling station.

Shreveport, La.—Mrs. Fannie A. Noel, filling station.

Augusta, Ga.—Sibert & Robinson, several filling stations.

Augusta, Ga.—Texas Oil Co., filling station.

Greensboro, N. C.—Spur Distributing Co., filling station.

Victoria, Tex.—The Texas Co., filling station.

Luverne, Minn.—Rock County Cooperative Co., service station.

Luverne, Minn.—White Eagle Oil & Refining Co., service station.

Joplin, Mo.—Phillips Petroleum Co., filling station.

Minneapolis, Minn.—Phillips Petroleum Co., filling station.

Madison, S. D.—White Eagle Oil & Refining Co., service station.

Watford City, N. D.—Cooperative Oil Co., bulk station.

Litchfield, Minn.—Standard Oil Co., filling station.

Polo, Ill.—B. A. Hayden, service station.

Astoria, Ill.—Charles Orwig, filling station.

Jacksonville, Ill.—Standard Oil Co., filling station.

Waterloo, Ia.—Mid-Continent Petroleum Co., filling station.

Jacksonville, Tex.—C. J. Barbier, service station.

Winfield, Kan.—Skelly Oil Co., service station.

Indianola, Ia.—Mid-Continent Petroleum Co., filling station.

Butte, Mont.—Robert Downing, service station.

Raymondville, Tex.—Gulf Refining Co., service station.

Stratford, Tex.—Phillips Petroleum Corp., bulk station.

Springfield, Mo.—Phillips Petroleum Corp., service station.

Gainesville, Tex.—Cities Service Oil Co., service station.

Butte, Mont.—Mrs. A. Murphy, filling station.

Newton, Ia.—Skelly Oil Co., service station.

Moberly, Mo.—Phillips Petroleum Corp., filling station.

Washington, Kan.—Consumers Oil Co., filling station.

Newark, N. J.—Samuel W. Rice, filling station.

Houston, Tex.—The Texas Co., filling station.

Holdenville, Okla.—C. M. Hardesy, service station.

Newell, S. D.—J. H. Christian, filling station.

Minneapolis, Minn.,—Cities Service Oil Co., filling station.

Oskaloosa, Ia.—Phillips Petroleum Corp., filling station.

Oskaloosa, Ia.—J. J. Cox, filling station.

Hagerstown, Md.—Cash & Carry Gasoline Corp., filling station.

Fulton, W. Va.—South Penn Oil Co., filling station.

Sistersville, W. Va.—C. D. Twyford and H. Winland, service station.

Quincy, Mass.—Cities Service Oil Co., service station.

Hamlin, W. Va.—Huntington Automobile Club, service station.

Harrisburg, Pa.—Gulf Refining Co., filling station.

Port Washington, L. I.—W. A. Eaton, filling station.

North Adams, Mass.—J. McCuen and A. Weymouth, filling stations.

Holland, O.—C. Haulund, filling station.

Columbus, O.—Sinclair Oil Refining Co., filling station.

Oklahoma City, Okla.—Phillips Petroleum Co., filling stations.

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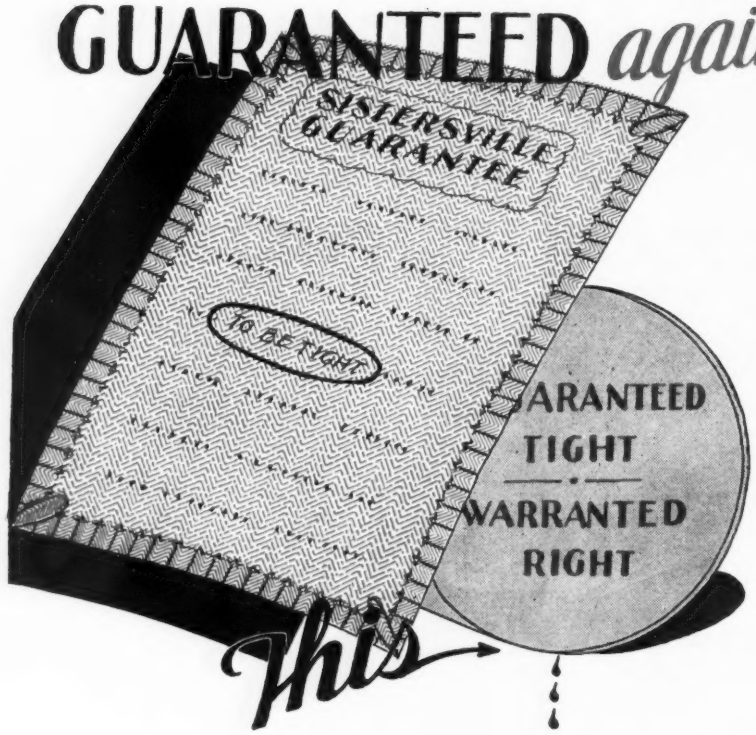

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New Stations Building
(Continued)

Minneapolis, Minn.—Pure Oil Co., filling station.

Nashville, Tenn.—The Texas Co., filling station.

Bloomington, Ind.—Mid-Continent Petroleum Co., filling station.

Binghamton, N. Y.—Standard Oil Co., service station.

Wilmington, Del.—Atlantic Refining Co., filling station.

Hagerstown, Md.—Cash & Carry Gasoline Corp., filling station.

Burkburnett, Tex.—Magnolia Petroleum Co., filling station.

Manley, Ia.—Manley Oil Co., filling station.

Oklahoma City, Okla.—Phillips Petroleum Co., filling stations.

Fredonia, Kans.—Feerless Motor Co., service station.

San Antonio, Tex.—The Texas Co., filling station.

Belmont, Mass.—Gulf Refining Co., filling station.

Hackensack, N. J.—William Dewar, filling station.

Tampa, Fla.—Pan American Petroleum Corp., filling station.

Allentown, Pa.—Gulf Refining Co., service station.

Des Moines, Ia.—Phillips Petroleum Co., filling station.

Buffalo, N. Y.—Standard Oil Co., filling station.

Augusta, Kans.—Cities Service Oil Co., and Phillips Petroleum, each filling station.

Lawton, Okla.—C. D. & L. W. Pokorny, service station.

Corsicana, Tex.—Central Texas Refining Co., filling station.

Nashville, Tenn.—Pan-American Petroleum Corp., service station.

Watseka, Ill.—Standard Oil Co., filling station.

Omaha, Neb.—Ommusy Oil & Gas Co., filling station.

Moberly, Mo.—Phillips Petroleum Co., filling station.

Lost Nation, Ia.—Mr. Busch, filling station.

Little Rock, Ark.—Spur Distributing Co., filling station.

Brooklyn, N. Y.—I. B. Miller, filling station.

New Britain, Conn.—George Riley, filling station.

Savannah, Ga.—American Oil Co., filling station.

Audubon, N. J.—Gulf Refining Co., service station.

Pittsburgh, Pa.—Standard Oil Co. of Pa., bulk station.

Oneonta, N. Y.—D. F. Keyes, filling station.

Savannah, Ga.—Standard Oil Co., filling station.

Luverne, Minn.—B. E. Leas, service station.

St. Paul, Minn.—Kittie E. Arny, bulk station.

Vermillion, S. D.—E. & E. Co., filling station.

Newark, N. J.—Alexander Isserman, filling station.

Newark, N. J.—S. W. Rice, filling station.

Barnesville, O.—Sinclair Refining Co., bulk station.

Trenton, N. J.—Harltow Realty Co., filling station.

Spartanburg, S. C.—George McGee, filling station.

Raleigh, N. C.—Sinclair Refining Co., filling station.

Tampa, Fla.—Atlantic Refining Co., filling station.

Savannah, Ga.—United States Rubber Co., service station.

Proper Installation of Gasoline Pumps Will Eliminate Grief

By G. W. McDougall*

"PUMP GRIEF" is an expression familiar to every pump manufacturer and oil company. Some of it is real, but the larger percentage of it comes from a lack of knowledge of the equipment itself, its proper installation, and an understanding of the conditions under which a pump can operate.

Few oil men seem to realize how much of an investment they have in their pumping equipment and how much money its maintenance is costing them. In several years' experience at selling gasoline pumps, the writer has often wondered at the lack of interest and consideration given by the buyer to the technical side of his equipment and its method of installation.

A pump installation in one case may be very simple and easy to make, in another it may present very severe difficulties. In every instance there are some simple and necessary practices for the proper operation of the equipment which are too often disregarded.

It is true that we all have, at times through inexperienced salesmen, made statements and given guarantees as to what our equipment would do, which exceeded the ability of any pump, gasoline or otherwise. Every sales executive regrets such statements, yet knows they will be repeated sometime, because of inexperience and a too enthusiastic desire to make the sale occasionally evidenced by some of their younger men.

This condition alone justifies all purchasers of gasoline pumps in devoting considerable time and study to the possibilities of his equipment and the installation conditions under which it will give most satisfactory service.

It is not my purpose to try and influence anyone either for or against any type of equipment, but to suggest that every oil man have some one in his organization who actually knows the merits and limitations of all the different types of gasoline pumps he has in use or contemplates using.

Every pump manufacturer in business today is honestly endeavoring to build a good pump at the best possible price, but it is not possible to build any pump which will meet some of the conditions imposed upon them. Again, one type of pump may be used under conditions which make proper operation impossible, and the pump is condemned, yet the same manufacturer could supply the proper pump if he was familiar with the operating requirements.

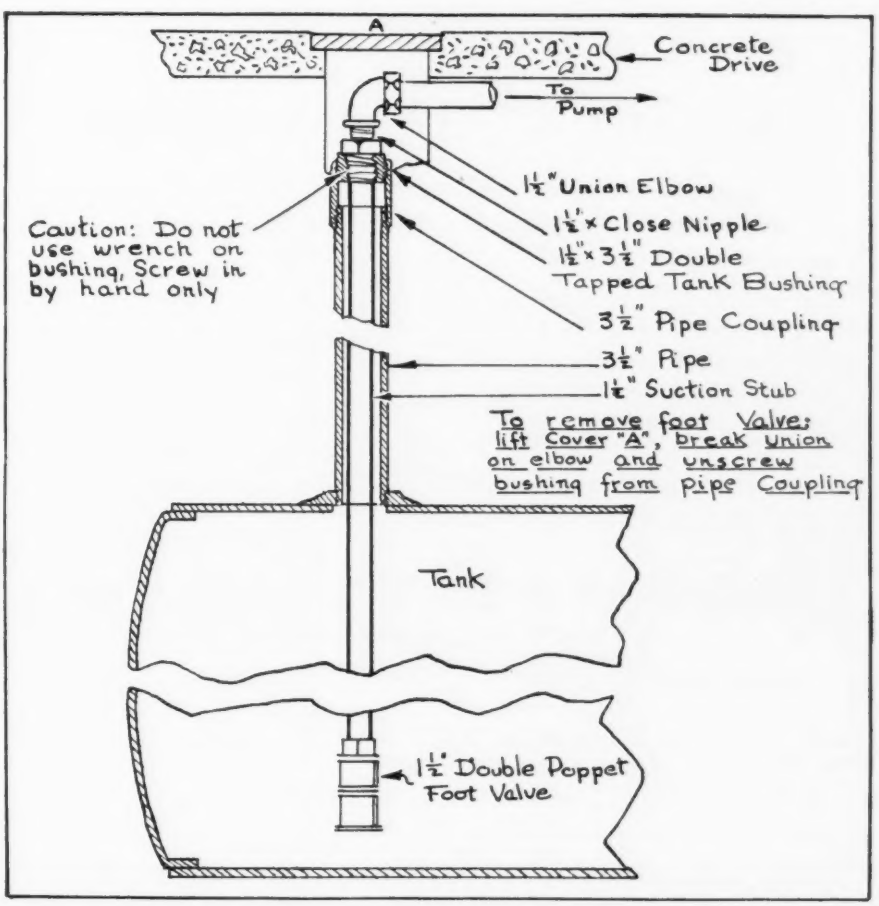
If you have an unusual pumping condition, write the pump manufacturer about it, they will all gladly advise you about it without charge.

Probably the greatest source of faulty pump operation today is in the case of a new pump replacing an obsolete one. The new pump is put in either for the reason that the old one fails to operate properly or is replacing another type of equipment.

In the first instance the pump shows signs of wearing out and a new one is bought to replace it. Very often it turns out that the old pump was not wearing out but either the foot valve or the suction line had developed a leak. I know of many instances where the pump manufacturer has been called upon to make his pump operate properly where the underground system was at fault, and for which the pump company was in no way responsible.

There is no question but that it is a great relief to find the difficulty above ground, but if it doesn't happen to be above ground, there is no golden road. The suction line or foot valve must come up and no pump manufacturer can or ever will build a pump which will overcome such difficulties.

BEFORE placing a new pump where one formerly stood first, fill the suction line with gasoline and let it stand for half an hour, if the line remains full, connect the pump to


A
Concrete Drive
To Pump
1½" Union Elbow
1½" × Close Nipple
1½" × 3½" Double Tapped Tank Bushing
3½" Pipe Coupling
3½" Pipe
1½" Suction Stub
Caution: Do not use wrench on bushing, Screw in by hand only
To remove foot Valve: lift Cover "A", break Union on elbow and unscrew bushing from pipe Coupling
Tank
1½" Double Poppet Foot Valve

Sketch showing a method of installing suction line to foot valve so that they may be removed and repaired without expensive excavation

*Sales Manager, Erie Meter Systems, Inc., Erie, Pa.

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it. If it does not, then take out the foot valve or suction line, for one or the other leaks must be repaired before the pump will operate properly.

When installing new foot valves, use some type of a surface flange so that it may be removed in a few minutes without digging into the ground.

Foot valves are not infallible. Pipe scale, dirt and excessive wear all contribute to their failure. Make it easy to replace them.

In setting pumps be sure the suction line is of the right length so that when the pump is bolted to the island there is no "strain" or "bind" on it, for this may throw the operating unit out of line enough to prevent its working.

The average man tightening the union coupling in a pump with a 24-inch wrench, exerts a force of several tons, which may, under certain conditions, do a great amount of damage.

Make certain the pump is wired correctly if it is a motor driven type. All fractional horsepower motors are wired for either 110 or 220 volts, but the three wires running from the motor are used in a different arrangement in each case, and getting them confused is a common source of error. Make certain your electric lines are not overloaded and the motor is receiving its full voltage. Overloaded lines are not an infrequent cause of trouble.

Every pump manufacturer sends out full installation instructions with his pumps. Make sure your men follow these instructions regardless of any ideas of their own.

Remember that the last factory operation before your pump was crated, was a trial on the test rack under actual but correct working conditions, and if you give it the same chance in the field, it will work correctly.

P & R Man Is Tennessee Jobbers Secretary

NASHVILLE, Tenn., Sept. 6.—Lew W. Collins, for the past two years sales manager of the Producers & Refiners Corp. of Tennessee, subsidiary of the P & R of Denver, was elected Aug. 5 executive secretary of the Tennessee Oil Men's Association. Mr. Collins was formerly sales manager in the middle west for the Producers & Refiners Corp., and has, therefore, a good working knowledge of marketing problems.

The Tennessee association met on Aug. 5 at Nashville, where its headquarters are. The association recently dropped the word "Independent" from its name, adopting the name above mentioned.

B. E. Holman is president, and Mark Senter and F. P. Kendall are vice presidents.

Oil Companies Boost "The Home Town"

How oil companies help to boost the home town idea is illustrated in the accompanying pictures. Fresno, Calif., in this case was recipient of oil company boosting. At the right is one of the illuminated signs erected by the Sunland Refining Co. along highways and railroads. A downtown window decorated by the Standard Oil Co. when air mail service was started is shown at the bottom. Below is a typical roadside sign of the Shell Petroleum Corp.

Box Type Cases

Attractive and serviceable cases of black cobra grain Keratol and lined with red velveteen. Comfortable handle. Plain bottles in separate compartments.

No. 260—Contains twelve 2-oz. long bottles and five ½-oz. tall grease jars **$3.20**

No. 261—Contains six 4-oz. bottles and five ½-oz. grease jars **$3.55**

No. 262—Contains seven 4-oz. bottles and five grease jars **$3.80**

No. 263—Contains nine 4-oz. bottles and four ½-oz. grease jars **$4.25**

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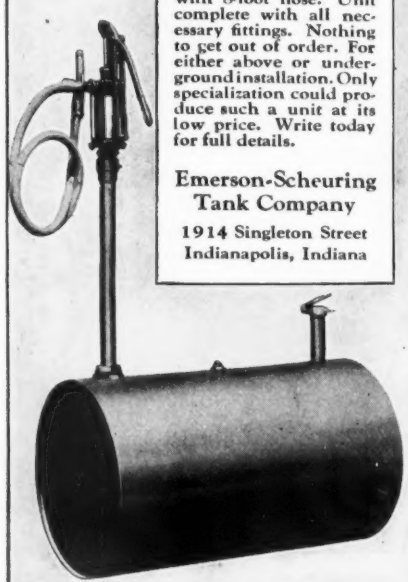

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ON THE LAZY BENCH

National Petroleum News

Mr. Stone met Mr. Wood on the boardwalk. A conversation ensued as follows:

Wood: "Well, Stone, how are all the little pebbles?"

Stone: "Fine, thanks; and how are the little splinters?"

With that a bathing beauty strolled by and, would you think it—Stone turned to Wood, Wood turned to Stone and both turned to rubber.

—Skelly News

* * *

Chicago Judge: "So you were going 60 miles an hour, huh?"

Gangster: "I had to Judge; I had just stolen the car."

Judge: "Case dismissed."

—Field Flashes

* * *

Diner: "I can't eat this stuff. Call the manager."

Waiter: "It's no use. He won't eat it either."

—Union Oil Bulletin

* * *

Doctor (inquiring after boy who had swallowed a half dollar): "How is the boy today?"

Anxious Mother: "No change yet."

—Southwestern Bulletin

* * *

A certain salesman was proposing to his best girl.

"And, sweetheart," he finished, "I'll lay my whole fortune at your feet."

"It isn't a very big fortune," she reminded him.

"I know, dear," he replied, "but it'll look awfully big beside your little feet!"

He got the job!

—Skelly News

* * *

The modern girl would make a wonderful cook if she could find a kitchen that was run by a steering wheel.

—The Valve World

* * *

Mean Man (seeking free advice)—I'm on my way home, doctor, I feel very seedy and worn out generally. What would you recommend me to take?

Doctor—A taxi.

—Doherty News

* * *

"What was the reason for your being discharged from your last place?" asked the employer of an applicant for a job.

"Good behavior, sir," replied the applicant.

"Nonsense! You would never be discharged for good behavior."

"Yes, sir; they took two months off my sentence."

—Skelly News

Cop—Lady, don't you know this is a safety zone?

Woman Driver (in difficulties)—Of course; that's why I drove in here.

—The Booster

* * *

Magistrate—"Can't this case be settled out of court?"

O'Grady—"That's what we were trying to do, your Honor, when the police interfered."

—Doherty News

* * *

"Who is that man in the blue coat, dear?"

"He's the umpire, darling."

"And why does he have that funny wire thing on his face?"

"That's to keep him from biting the players."

—Field Flashes

* * *

Music Teacher: "What is your idea of harmony?"

Smart Student: "A freckle-faced girl with a polka-dot dress, leading a giraffe."

—Southwestern Bulletin

* * *

Like A Light

In the parlor there were three,
One, two, three,—
She, the parlor lamp and he
Hee-Hee!
Two is company, no doubt,
So the little lamp went out!

—Magnolia Oil News

* * *

"Jim go to Europe on a scholarship this year?"

"No, I think it was a cattleship."

—Doherty News

* * *

Madge: Is doctor Blythe good at extracting bullets?

Mae: Yes, he's very good. I've been sending my husbands to him for years.

—Field Flashes

* * *

Nerves of Steel, Too?

"Here," said a lady to a beggar, "is a glass of water—pure, cold, delicious water. What, you refuse it?"

He shook his head and sighed. "I have to, ma'am," he said. "You see, I've got an iron constitution, and water would rust it."

—Southwestern Bulletin

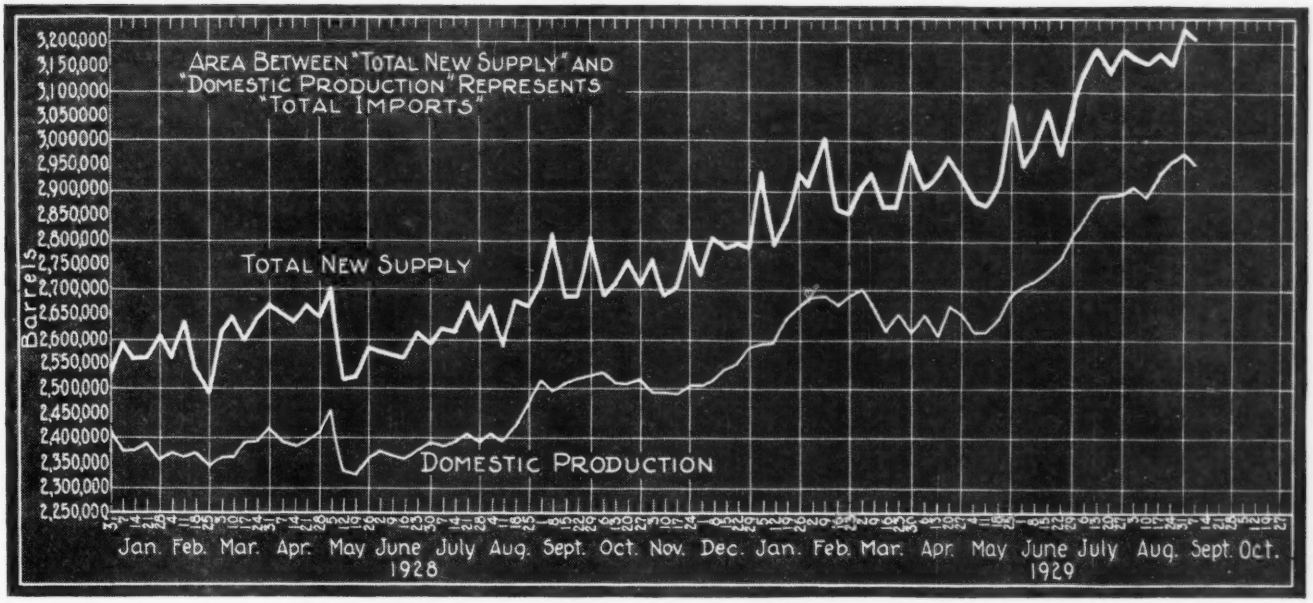
* * *

Jerry—"I hear, Pat, they've gone bone dry in the village where your brother lives."

Pat—"Dry, mon' they're parched. I've just had a letter from Mike an' the postage stamp was stuck on with a pin."

—The Booster

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Sept. 7	Aug. 31
Production east of Rockies	2,102,150	2,098,550
Increase		3,600
Total production in U. S.	2,956,350	2,973,450
Decrease		17,100
Crude oil imports	253,429	279,856
Decrease		26,427
Total crude supply	3,209,779	3,253,306
Decrease		44,527

OKLAHOMA

	Sept. 7	Aug. 31
Allen Dome	24,000	23,400
Asher	11,550	11,200
Blackwell	3,700	3,750
Bowlegs	32,300	32,800
Braman	4,000	4,050
Bristow-Slick	21,900	21,400
Burbank	18,450	18,700
Carr City	11,450	11,600
Cromwell	8,100	8,100
Cushing	17,000	17,700
Davenport	1,350	1,350
Duncan District	7,750	7,700
Earlsboro	88,550	89,500
East Seminole	7,600	7,700
Fox	1,350	1,400
Garber	5,200	5,050
Graham	4,300	4,250
Healdton	13,000	12,900
Hewitt	7,950	7,900
Hubbard	1,800	1,800
Little River	79,100	79,500
Logan County	17,000	19,000
Maud	11,950	12,550
Mission	25,100	25,300
North Okmulgee	12,250	12,250
Oklahoma City	52,450	47,650
Osage (outside Burbank)	26,000	26,000
Papoose	3,300	3,300
Pearson	1,150	1,150
St. Louis	66,900	67,100
Scholem-Alechem	12,950	13,000
Searight	12,000	12,100
Seminole	33,050	33,200
South Okmulgee	8,450	8,450
Thomas	900	900
Tonkawa	9,100	9,100
Wewoka	4,550	4,550
Yale-Jennings	7,000	7,000
Others	60,900	61,400
Total, Oklahoma	735,400	735,750
Decrease		350

KANSAS

Augusta-Fox Bush.	3,050	3,050
Churchill	7,350	7,350
Eldorado-Towanda	13,000	13,050
Florence-Covert	1,000	1,000
Greenwood County	20,900	20,850
Oxford	4,150	4,400
Peabody-Elbing	3,400	3,450
Rainbow Bend	1,050	1,050
Russell	3,200	3,100
Sedgwick County	36,500	35,200
Others	36,000	35,800
Total, Kansas	129,600	128,300
Increase		1,300

NORTH LOUISIANA

Bellevue	650	600
Caddo, light	9,150	9,600
Caddo, heavy	3,300	3,200
Cotton Valley	2,300	2,400
De Soto and Red River	3,100	3,550
Elm Grove	500	550
Haynesville	4,950	4,950
Homer	3,850	3,900
Pleasant Hill	1,100	1,150
Urania	6,350	6,400
Others	300	200
Total, North Louisiana	35,550	36,500
Decrease		950

ARKANSAS

Champagnolle	6,300	6,350
El Dorado	4,650	4,600
Lisbon	1,200	1,200
Nevada	1,000	1,000
Smackover, light	6,000	6,050
Smackover, heavy	45,750	45,850
Stephens	1,000	1,000
Others	100	100
Total, Arkansas	66,000	66,150
Decrease		150

TEXAS (Outside Gulf Coast)

Panhandle District

	Sept. 7	Aug. 31
Carson County	9,850	9,500
Gray County	100,000	100,400
Hutchinson County	25,300	25,400
Wheeler County	850	800
Others	900	1,000
Total, Panhandle Texas	136,900	137,100
Decrease		200

North Texas

Archer County	19,600	19,850
Burkburnett	9,200	9,000
Electra	12,000	11,950
Iowa Park and K. M. A.	5,150	5,050
Montague-Cooke	18,600	17,900
Wilbarger	33,150	32,850
Others	800	800
Total, North Texas	98,500	97,400
Increase		1,100

West Central Texas

Brown County	8,500	8,400
Callahan County	4,100	4,100
Coleman County	7,600	7,400
Eastland-Desdemona	7,200	8,150
Jack County	3,950	3,600
Palo Pinto County	400	450
Shackleford County	11,000	11,050
Stephens County	6,700	6,750
Throckmorton County	700	600
Young County	8,200	8,250
Others	700	700
Total, West Central Texas	59,050	59,450
Decrease		400

West Texas

Crane and Upton Counties	45,900	46,100
Crockett County	2,300	2,150
Howard County	36,500	37,550
Jones County	3,300	3,300
Mitchell and Scurry Counties	2,600	2,500
Pecos County	133,800	133,600
Reagan County	17,500	17,600
Winkler County	128,000	131,100
Others	3,000	2,850
Total, West Texas	372,900	376,750
Decrease		3,850

East Central Texas

Boggy Creek	2,600	2,650
Corsicana-Powell	7,600	7,700
Currie	400	400
Mexia	5,700	5,800
Nigger Creek	300	300
Richland	350	350
Wortham	1,000	1,050
Total, East Central Texas	17,950	18,250
Decrease		300

Southwest Texas

Dale	500	450
Laredo District	10,600	10,150
Luling	11,450	11,600
Lytton Springs	1,000	1,000
Salt Flat	43,900	45,850
Somerset	1,700	1,700
Others	7,000	6,300
Total, Southwest Texas	76,150	77,050
Decrease		900
Total, Texas (Outside Gulf Coast)	761,450	766,000
Decrease		4,550

GULF COAST

Coastal Texas

Barbers Hill	22,550	22,300
Batson	1,300	1,300
Big Creek	2,950	3,850
Blue Ridge	2,400	2,600
Boling	1,350	1,350
Damon Mound	600	600
Goose Creek	5,600	5,750
Hull	8,700	9,000
Humble	9,000	9,750
Orange County	2,800	2,700
Pierce Junction	15,200	13,500
Raccoon Bend	8,400	8,350
Saratoga	1,100	900
Somerville	2,100	2,000
Sour Lake	2,700	2,600
South Liberty	5,250	5,300
Spindletop	23,800	24,200
Sugarland	11,600	11,050
West Columbia	6,300	6,200
Others	4,000	3,700
Total Coastal Texas	137,700	137,000
Increase		700

Coastal Louisiana

East Hackberry	1,600	2,500
Edgerly	750	750
Evangeline	2,000	2,100
Lockport	3,200	3,450
Old Hackberry	2,250	2,400
Sorrento Dome	200	200
Sulphur Dome	6,000	3,250
Sweet Lake	50	50
Vinton	4,000	4,000
Others	1,400	1,450
Total, Coastal Louisiana	21,450	20,150
Increase		1,300
Total Gulf Coast	159,150	157,150
Increase		2,000

ROCKY MOUNTAIN

Wyoming

Big Muddy	2,250	2,200
Elk Basin	850	850
Grass Creek	2,300	2,250
Labarge	2,300	2,300
Lance Creek	200	200
Lost Soldier	3,950	3,850
Oregon Basin	5,850	5,900
Rock Creek	2,350	2,450
Salt Creek	35,100	35,200
Others	4,250	4,200
Total, Wyoming	59,400	59,400

Montana

Cat Creek	1,400	1,400
Pondera	2,700	3,000
Sunburst	6,950	6,750
Others	50	50
Total, Montana	11,100	11,200
Decrease		200

Colorado

Florence	750	950
Fort Collins	2,050	2,100
Moffat (Craig)	1,000	1,250
Others	2,250	2,350
Total, Colorado	6,050	6,650
Decrease		600

New Mexico

Artesia	850	850
Hogback	250	100
Rattlesnake	1,800	1,800
Table Mesa	150	100
Others	400	400
Total, New Mexico	3,450	3,250
Increase		200
Total, Rocky Mountain	80,000	80,500
Decrease		500

CALIFORNIA

Dominguez	9,300	9,500
Elwood-Goleta	20,500	20,500
Huntington Beach	44,000	44,000
Inglewood	24,000	24,000
Kettleman Hills	6,000	4,500
Long Beach	168,000	169,000
Midway Sunset	68,000	68,000
Rosecrans	6,500	6,500
Santa Fe Springs	265,000	284,000
Seal Beach	42,000	44,000
Torrance	12,600	12,600
Ventura Avenue	62,000	62,000
Others	126,300	126,300
Total, California	854,200	874,900
Decrease		20,700

EASTERN

(Including Ill., Ind., Ky., O., W. Va., Pa., and N. Y.)	135,000	128,000
Increase		6,800

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations Week Ended September 6 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended Sept. 6
Plants Reporting	12	29	25	15	12	93
Da. Av. Cap. (Bbls.)	92,000	160,200	86,600	81,500	54,900	475,200
Da. Cracking Capacity	30,700	52,600	17,200	5,000	22,700	128,200
Da. Av. Crude Runs	65,036 + 2.6	115,071 + 0.4	61,437 — 12.4	43,771 — 14.6	55,487 — 6.4	340,802 — 5.0
Da. Av. Other Oils	5,098 — 48.2	6,127 + 34.7	4,761 +107.2	723 — 49.9	3,042 + 15.3	19,751 — 4.9
GASOLINE—Gallons						
Stocks, Aug. 30	12,497,000	56,897,000	13,359,000	8,591,000	12,720,000	104,064,000
Prod. 8-30 to 9-6	10,112,000 — 8.1	17,126,000 — 5.0	7,456,000 — 12.1	3,724,000 — 12.6	5,075,000 — 12.3	43,493,000 — 8.5
Ship. 8-30 to 9-6	12,361,000 — 1.4	19,418,000 + 2.1	8,392,000 — 7.7	3,670,000 + 2.7	5,438,000 — 1.1	49,279,000 — 0.9
Stocks, Sept. 6	10,248,000 — 18.0	54,605,000 — 4.0	12,423,000 — 7.0	8,645,000 + 0.6	12,357,000 — 2.7	98,278,000 — 5.6
Ratio Sales to Prod.	122.2%	113.4%	112.6%	98.6%	107.2%	113.3%
KEROSENE—Gallons						
Stocks, Aug. 30	6,390,000	4,523,000	2,127,000	22,000	1,154,000	14,216,000
Prod. 8-30 to 9-6	2,405,000 + 6.7	2,366,000 + 4.5	1,537,000 — 14.8	23,000 + 21.0	169,000 — 72.9	6,500,000 — 6.7
Ship. 8-30 to 9-6	2,267,000 + 2.3	2,026,000 — 25.5	1,453,000 — 13.9	3,000 — 57.1	517,000 + 22.8	6,266,000 — 11.9
Stocks, Sept. 6	6,528,000 + 2.2	4,863,000 + 7.5	2,211,000 + 3.9	42,000 + 90.9	806,000 — 30.2	14,450,000 + 1.6
Ratio Sales to Prod.	94.3%	85.6%	94.5%	1.3%	305.9%	96.4%
STOVE DISTILLATE—Gallons						
Stocks, Aug. 30	1,750,000	5,993,000	1,025,000	193,000	53,000	9,014,000
Prod. 8-30 to 9-6	408,000 + 13.6	595,000 — 25.4	155,000 + 6.9	109,000 — 6.8	270,000 + 52.5	1,537,000 — 3.8
Ship. 8-30 to 9-6	392,000 + 22.1	671,000 — 6.4	74,000 + 60.8	87,000 +335.0	109,000 — 40.6	1,333,000 + 7.2
Stocks, Sept. 6	1,766,000 + 0.9	5,917,000 — 1.3	1,106,000 + 7.9	215,000 + 11.4	214,000 +303.8	9,218,000 + 2.3
Ratio Sales to Prod.	96.1%	112.8%	47.7%	79.8%	40.4%	86.7%
GAS OIL—Gallons						
Stocks, Aug. 30	5,474,000	36,794,000	4,646,000	9,562,000	6,075,000	62,551,000
Prod. 8-30 to 9-6	1,563,000 — 9.9	3,002,000 + 7.3	1,031,000 — 3.7	1,154,000 + 35.0	1,949,000 — 2.3	8,699,000 + 2.9
Ship. 8-30 to 9-6	959,000 — 27.6	1,566,000 + 22.2	1,586,000 +203.2	814,000 — 14.5	1,326,000 — 51.4	6,251,000 — 8.2
Stocks, Sept. 6	6,078,000 + 11.0	38,230,000 + 3.9	4,091,000 — 11.9	9,902,000 + 3.6	6,698,000 + 10.3	64,999,000 + 3.9
Ratio Sales to Prod.	61.4%	52.2%	153.8%	70.5%	68.0%	71.9%
FUEL OIL—Gallons						
Stocks, Aug. 30	15,943,000	55,866,000	57,490,000	30,912,000	23,297,000	183,508,000
Prod. 8-30 to 9-6	5,118,000 + 2.0	6,737,000 — 5.1	7,436,000 — 9.1	6,312,000 — 19.8	6,372,000 — 16.7	31,975,000 —10.7
Ship. 8-30 to 9-6	6,791,000 + 39.3	7,536,000 — 11.7	6,740,000 + 21.6	5,791,000 — 14.3	7,165,000 — 13.9	34,023,000 - 0.04
Stocks, Sept. 6	14,270,000 — 10.5	55,067,000 — 1.4	58,186,000 + 1.2	31,433,000 + 1.7	22,504,000 — 3.4	181,460,000 - 1.1
Ratio Sales to Prod.	132.7%	111.9%	90.6%	91.8%	112.4%	106.4%

Gasoline Produced by Various Methods, Week Ended September 6

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,627,000	65.5	11,758,000	68.7	5,467,000	73.3	3,107,000	83.4	1,571,000	31.0	28,530,000	65.6
Cracked	2,922,000	28.9	4,402,000	25.7	1,489,000	20.0	.....	.....	2,835,000	55.9	11,648,000	26.8
Natural	563,000	5.6	966,000	5.6	500,000	6.7	617,000	16.6	669,000	13.1	3,315,000	7.6
Total	10,112,000		17,126,000		7,456,000		3,724,000		5,075,000		43,493,000	

+or — columns are % change over previous week.

Gasoline Stocks Fall Below 100,000,000 Gallons

Staff Special—By Telegraph
TULSA, Sept. 10

GASOLINE stocks at 93 Mid-Continent refineries that report their operating statistics weekly to NATIONAL PETROLEUM NEWS, were lowered 5,700,000 gallons in the first week of September. The reduction was due principally to substantial reduction in production. Crude oil runs to stills were curtailed 17,800 barrels daily average.

Gasoline stocks at the 93 plants Sept. 6 were less than 100,000,000 barrels for the first time since the second week of January this year.

All districts except Kansas and Oklahoma reduced crude oil runs. West Texas was the only district to add to gasoline stocks, and the addition was only 54,000 gallons.

Stocks of kerosene stove distillates and gas oil were increased. Fuel oil production was reduced 3,800,000 gal-

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended Aug. 30. Change in stocks figured from Aug. 9.

GASOLINE

	Gallons
Production	184,925,000
Shipments	203,794,000
Net change in stocks	—18,969,000
Ratio sales to production	118.0%

KEROSENE

Production	28,318,000
Shipments	30,128,000
Net change in stocks	—1,810,000
Ratio sales to production	106.4%

STOVE DISTILLATE

Production	5,336,000
Shipments	4,959,000
Net change in stocks	+377,000
Ratio sales to production	92.9%

GAS OIL

Production	32,479,000
Shipments	30,436,000
Net change in stocks	+2,043,000
Ratio sales to production	93.7%

FUEL OIL

Production	140,551,000
Shipments	143,390,000
Net change in stocks	—2,839,000
Ratio sales to production	102.0%

lons, while shipments were virtually unchanged and stocks were reduced 2,000,000 gallons.

Crude, Gasoline Production Rises in California

WASHINGTON, D. C., Sept. 7.—California daily average crude production was up 5.29 per cent and gasoline stocks 4.05 per cent in July over June, so the Bureau of Mines report for July shows. Movement of California crude and gasoline through the Panama Canal was up in July over June also. Crude shipments were increased 158.82 per cent and gasoline 46.80 per cent.

Competing districts showed a reduction in gasoline stocks and an increase in daily average crude production for these periods. Gasoline stocks were down 23.18 per cent on the East coast; 16.70 per cent in Oklahoma, Kansas and Missouri; 14.59 per cent in Appalachian district; and 13.99 per cent in Indiana, Illinois, and Kentucky. Texas crude production was up 6.37 per cent in July over June, Oklahoma 6.10 per cent, Kansas 10.44 per cent, and Appalachian district 9.79 per cent.

For the country as a whole crude runs to stills were lower in July than in June by 1.46 per cent, gasoline production was increased by 2.86 per cent, and a new high was set in daily average crude production, the report showed.

Crude oil imports dropped 10.11 per cent in July over June while exports increased 15.25 per cent. Stocks of foreign crude on the Atlantic and Gulf coasts increased 3.73 per cent.

Daily average crude production reached 2,946,000 barrels in July, an increase of 5.96 per cent over June. Texas moved into first place among oil producing states with a daily average of 872,900 barrels. California was second with 864,400 barrels. July was the first month that total production exceeded 90,000,000 barrels. July production being 91,327,000 barrels.

Total crude stocks at refineries east of California were up 1.70 per cent in July over June. Foreign stocks at refineries were down 8.77 per cent on the East coast, 25.52 per cent on Texas Gulf, and 7.22 per cent on Louisiana Gulf coast. Total stocks east of California, including pipe line and tank farm, were up 1.03 per cent in July over June while California stocks were up 2.75 per cent.

Gasoline production was at a new peak of 1,221,000 barrels daily average in July. This is a 15 per cent increase over July 1928. Daily average indicated domestic demand was at a new peak also, of 1,189,000 barrels, or an increase of 13 per cent over July, 1928.

Production of kerosene, gas and fuel oil, lubricants, and wax decreased in July over June.

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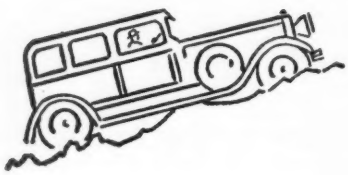

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Gasoline Price Range Widens While Demand Lags in Mid-Continent

Staff Special
TULSA, Sept. 7

"A WIDER price range for gasolines, a lighter demand from the domestic trade and keener competition for the business which existed were the developments in the Mid-Continent refinery market the first week of September.

Quotations on a group 3 basis were revised downward in several districts, but the differential territory quotations for the most part were left unchanged.

Natural gasolines suffered from the lighter demand for straight run goods and reacted accordingly.

Kerosene demand was comparatively good in some quarters. General rains through the Middle West were expected to stimulate buying.

Distillates, gas oil and fuel oils were the most active commodities in the list of major products. Prices advanced slightly during the week.

Other products were generally unchanged both in price and demand.

Gasolines

The advent of September witnessed an intensive selling campaign on the part of a few refiners who desired to get as much gasoline as possible on the books for September delivery, and who accordingly made some attractive offers to buyers for over the month delivery. The quotations for 58-60 U. S. Motor, for instance, ranged from 7 to 7.25 cents a gallon in Oklahoma.

This situation was not general, but was nevertheless a big factor in the general gasoline situation during the week. The majority of refiners continued to quote 7.50 to 7.75 cents for U. S. Motor in Oklahoma for spot delivery, but with the lower over-the-month prices, naturally witnessed a slowing up in the demand for their goods.

Just what effect the lower quotations from a few refiners will have on the general market structure for the month remains to be seen. At the close of business Sept. 7 no material change in spot prices had been announced by the majority of refiners but there were indications some revision downward would have to be made before the middle of the month unless demand showed a tremendous increase.

North Texas refiners furnished most of the competition encountered by other districts. Prices for 58-60 U. S. Motor ranged from 7 cents up during the week, some of the quotations at that figure being on a Group 3 basis. Several of the refiners in that district evidently desired to push out as much gasoline as possible even at prices under those in other districts, in order to get as good a volume of business as possible before bad weather sets in. With the absence of any appreciable export buying this year, those refiners have had to seek their markets diligently and constantly in order to exist.

Arkansas and Louisiana refiners sold their gasolines at 8 cents most of the week, for freight differential territory, but moved some goods for northern haul at considerably lower prices. These refiners reported late in the week they had encountered extremely stiff competition from the north Texas refiners.

Other refining districts made only slight changes in their differential territory prices but in some instances met the lower quotations from other districts made on a group 3 freight basis.

Lower gravity gasolines lost some ground both in price and demand, while the higher gravities showed a slow but steady increase in demand which was not sufficient, however, to cause any change upward in prices.

Natural Gasoline

Manufacturers reported contract movement of natural gasolines was fair and buying for over September was about normal, but spot demand was extremely light. The majority of refiners who had been buying naturals with which to blend up their heavier ends of refined gasolines apparently had completed the task for this year, and the natural gasolines required now were primarily for current production.

Prices of all grades of naturals lost some ground during the week. Grades A and AA moved downward 0.25 to 0.50 cent a gallon while grades BB and C were lower by 0.125 to 0.375 cent a gallon.

Kerosene

A rain the middle of the week which was reported to have been general in the Middle West was expected to stimulate kerosene buying within the next few days. Farmers had been unable to get into their fields for fall plowing due to the dry weather which had hardened the soil. The rain was just about sufficient, according to reports from several division points, to make the soil excellent for plowing.

That the fall plowing, especially in the northern part of the Middle West, will have to be done soon was indicated by weather reports late in the week of snow in Montana.

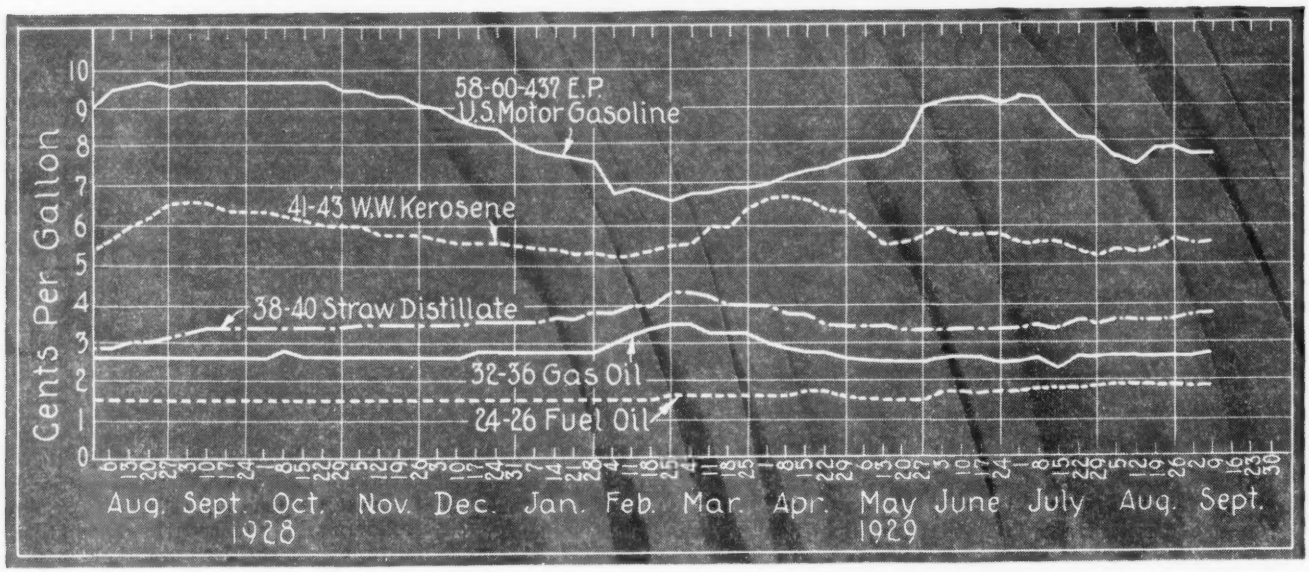
Kerosene prices lost a little ground with a few refiners shaving prices to keep production moving without the necessity of storing any goods. Many of the refiners who make a treated product and have sufficient storage space, took no recognition of the lower quotations.

Distillates and Gas Oils

The price trend for distillates continued to be upward although demand for spot shipment was unchanged from the last week in August. Quotations Sept. 7 ranged from 3.75 to 4 cents, with the better grade of goods moving well at the higher level.

Several refiners indicated they would have no distillates to offer on the spot market this year other than to their regular gasoline accounts. That situation has existed to some extent for several years, but from all indi-

Current Prices of Principal Mid-Continent Refined Products



Prices shown are in Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

cations one would be inclined to the conclusion that there is a more decided trend that way this year than ever before.

Recycled gas oil also was in good demand with goods reported comparatively scarce for prompt shipment. Ordinary U. G. I. gas oil was more freely obtainable than was the low cold test goods.

Fuel Oils

The season of heavy consumption of fuel oils is just around the corner and refiners have been experiencing a steadily increasing demand for the past three or four weeks. The higher gravities with low cold test especially have been in good demand with goods scarce for spot shipment. Prices on several grades have moved up from 2.5 to 5 cents a barrel the past week.

Neutral Oils, Cylinder Stocks, Wax

Demand for neutral oils was reported quiet but prices were generally unchanged. Bright stocks were in active demand with supply limited. Wax prices showed some improvement for spot shipment. Little if any 124-126 white crude scale grade was obtainable the past week at under 2.75 cents a pound.

Marketing Features Added To Tulsa Exposition

TULSA, Sept. 7.—The International Petroleum Exposition this year will incorporate a new feature—an exhibit by manufacturers of marketing equipment, together with a program on retail and wholesale marketing. The inclusion of this feature will make the show cover virtually every phase of the oil industry. The show heretofore has been confined primarily to producing and refining.

Before deciding to include marketing on the program General Manager Way wrote the executives of virtually all the larger oil companies for expressions of opinion. The replies were without exception complete endorsements of the proposed plan.

At the present time approximately 25 manufacturers of marketing equipment have signified their intention of exhibiting, and if the plan proves as successful as anticipated, the Exposition officials probably will authorize for next year the erection of a building especially for this branch of the industry.

The program has not been completed, but Friday afternoon, Oct. 11 has been set aside as Marketers Day. The program undoubtedly will have as one of its main topics the recently adopted Code of Marketing Practices.

Several of the oil companies with headquarters in Tulsa already have invited their jobber friends to attend the show. The Exposition heretofore has not had a wide appeal to that class of oil men. The marketing section of the Exposition also will be the only one held so far which will be international in scope.

NEW YORK, Sept. 10.—Progress of the research projects from July 1, 1928 to June 30, 1929 are reported in the American Petroleum Institute's weekly bulletin No. 55 for Sept. 7. These projects were under the Institute's auspices and were financed by the Universal Oil Products Co. and John D. Rockefeller. The report lists papers published or approved up to Sept. 5, and projects and personnel for the period of July 1, 1929 to June 30, 1930.

Prices 10 Years Ago
Sept. 8, 1919

	Oklahoma	Penna.
58-60 U. S. Motor	17.00–17.25c	20.25–20.50c
80-84 Natural	21.00–21.25c	.....
Kerosene (41-43 Okla.; 47 w. w. Pa.)	9.50–10.00c	13.00c
Fuel Oil (24-26 Okla.; 38-40 Pa.)	$0.85	5.50c
Crude (Okla. 35-35.9)	$2.25	$4.25
Chicago tank wagon	.....	21.00c

Prices A Year Ago
Sept. 10, 1928

	Oklahoma	Penna.
58-60 U. S. Motor	9.7500c	12.00–12.50c
Grade A Natural	8.75–9.00c	.....
Kerosene (Okla. 41-43; Pa. 47 w. w.)	6.50–6.75c	8.75–9.00c
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.65–$0.675	4.50–4.75c
Crude (Okla. 35-35.9)	$1.31	$3.10
Chicago tank wagon	.....	15.00c

Chicago Resale Market

Light Oils Sag; Heavy Oils Higher

Staff Special
CHICAGO, Sept. 7

A DOWNWARD revision in the spot market price of gasoline and kerosene and higher prices on the heavier oils were the outstanding events of interest in the Chicago resale market in the week ended Sept. 7.

The expected "after Labor Day" buying in the spot market did not materialize to any great extent and consequently sales were not at a very high level. Consumption of gasoline over the week-end was close to a new high record but evidently most jobbers had anticipated this heavy demand and stored sufficient gasoline to take care of it. Spot buying this week was on a hand-to-mouth basis and generally for one, two or three car lots. Most refiners reported their contract customers were still ordering out close to their maximum commitments.

Spot gasoline prices took a tumble towards the last of the week and closed a 0.25-cent lower on the U. S. Motor grade. The major refiners, both in Oklahoma and in the Chicago area, continued to hold their spot price at 7.75 cents. On the other hand, several of the smaller Oklahoma refiners offered goods as low as 7.25 cents to jobbers and at 7 cents for resale. U. S. Motor gasoline out of north Texas was available at 7 cents for resale purposes and goods from west Texas came into this territory for resale at under 7 cents in a few cases. Several marketers offered West Texas Motor to jobbers at 7.125 cents, f.o.b. Group 3.

The report of the reduction in tank wagon and service station prices in Pennsylvania and Delaware by Atlantic Refining Co., effective Sept. 9 and also of further reductions in spot gasoline prices along the east coast, had a depressing effect on the local trade. There has been more competition in eastern Michigan and Indiana from eastern refiners lately and lower prices in the east will probably tend to move more gasoline in this direction, several sellers said.

While there has been considerable pro and con talk regarding a reduction in tank wagon and service station gasoline prices in the Standard of Indiana territory, nothing definite could be learned. However, a number of the Chicago trade were of the opinion that no change would be made for two or three weeks unless price cutting increased to a large extent.

Reports from over the Indiana territory indicate that there has been considerably less cutting of service station prices than in former years, despite the wide margins between spot and retail prices which have prevailed most of the summer.

The demand for kerosene was steady in most quarters this week but a number of sellers said they were disappointed in the volume of business done. They had expected an active demand about Sept. 1 but this failed to materialize.

Most sellers held their prices on 41-43 w.w. kerosene unchanged over the week but it was available in several quarters at reduced prices. The general price range Sept. 7 was 5.375 to 5.75 cents, although an occasional sale was reported as low as 5.125 cents.

Good grades of distillate, gas and fuel oil continued scarce for prompt shipment and prices of these grades were still moving upward. Industrial concerns were in the market for their normal quantities of fuel oils and this, along with a steady demand from distributors of home burner oils, kept the spot market free of any surplus goods.

Carlot marketers said they could easily move fuel and furnace oil at present prices but were unable to find any quantity of these goods available on the spot market. They said that there were only two or three sources where they could obtain 18-22 zero high sulfur fuel oil for prompt shipment, and the prices from these refiners have advanced approximately 10 cents per barrel in the past month.

Several distributors of burner oil in tank trucks raised their prices this week and others announced advances effective Sept. 15. The new prices generally range from 4.50 cents per gallon on 18-20 fuel oil to 7.50 cents on the 38-40 straw distillate.

Occasional shower periods likely in Standard of Indiana territory next week with temperatures generally near the seasonal normal.

NEW YORK, Sept. 7.—The annual convention of the American Gas Association will be at Atlantic City, Oct. 14 to 18. Gas industry speakers will be Samuel Insull, Jr., of the Midland Utilities Investment Co.; Walter C. Beckjord, of the American Light & Traction Co. and George E. Whitwell, of the Equitable Gas Co.

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OAKITE
Industrial Cleaning Materials and Methods

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect September 9

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	7.7060 (Wt. Avg.)	7.7060 (Wt. Avg.)	
Kansas	7.625-7.75		S. O. Neb. & Ind. Ter., etc.
Kansas		8.0000 (Wt. Avg.)	Kansas only.
North Texas	7.125-7.50	7.00-7.375	
West Texas	7.00-7.50	7.00-7.25	
Louisiana-Ark.	7.50-7.75		Mich., Ohio & Indiana.
Louisiana-Ark.		8.00	State or differential haul.
Indiana-Illinois	7.50-7.75	*	S. O. Ind. territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from E. Chicago, Ind., and Wood River, Ill., according to conditions and freight rates; no prices F.O.B. point of origin can be given.

Weighted Average Prices

OKLAHOMA

	Sept. 9		Sept. 3		Aug. 26	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	74	7.7060	148	7.7272	83	7.7560
60-62 437 e. p. gasoline	No sales reported		1	7.8750	1	7.7500
60-62 400 e. p. gasoline	1	8.0000	2	8.0000	No sales reported	
64-66 375 e. p. gasoline	3	8.3750	1	8.3750	2	8.5000

While some quotations for over-the-month shipment were reported at lower prices, prevailing spot prices for gasoline remained generally unchanged right up to the close of August, as indicated by the above weighted averages. Demand continued to be fair at the unchanged prices.

KANSAS

	Sept. 9		Sept. 3		Aug. 26	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	1	8.0000	2	8.0000	4	8.0000

A few refiners in Kansas made slight reductions in Group 3 quotations but goods for shipment within the state remained at unchanged price levels most of the past week.

GASOLINE AND NAPHTHA

OKLAHOMA	Prices Sept. 9	Prices Sept. 3	Prices Aug. 26
48-50 450 e.p. naphtha	7.50	7.50	7.50
50-52 450 e.p. naphtha	7.50	7.50	7.50
56-58 450 e.p. gasoline	7.25 – 7.375	7.25 – 7.375	7.375– 7.50
58-60 450 e.p. gasoline	7.25 – 7.50	7.375– 7.50	7.375– 7.625
64-66 390 e.p. gasoline	8.00 – 8.25	8.00 – 8.25	8.00 – 8.25
68-70 350-360 e.p. gasoline	8.25 – 8.50	8.25 – 8.50	8.375– 8.50

Prices nominal ††Only one refiner quoting *Quotations only

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

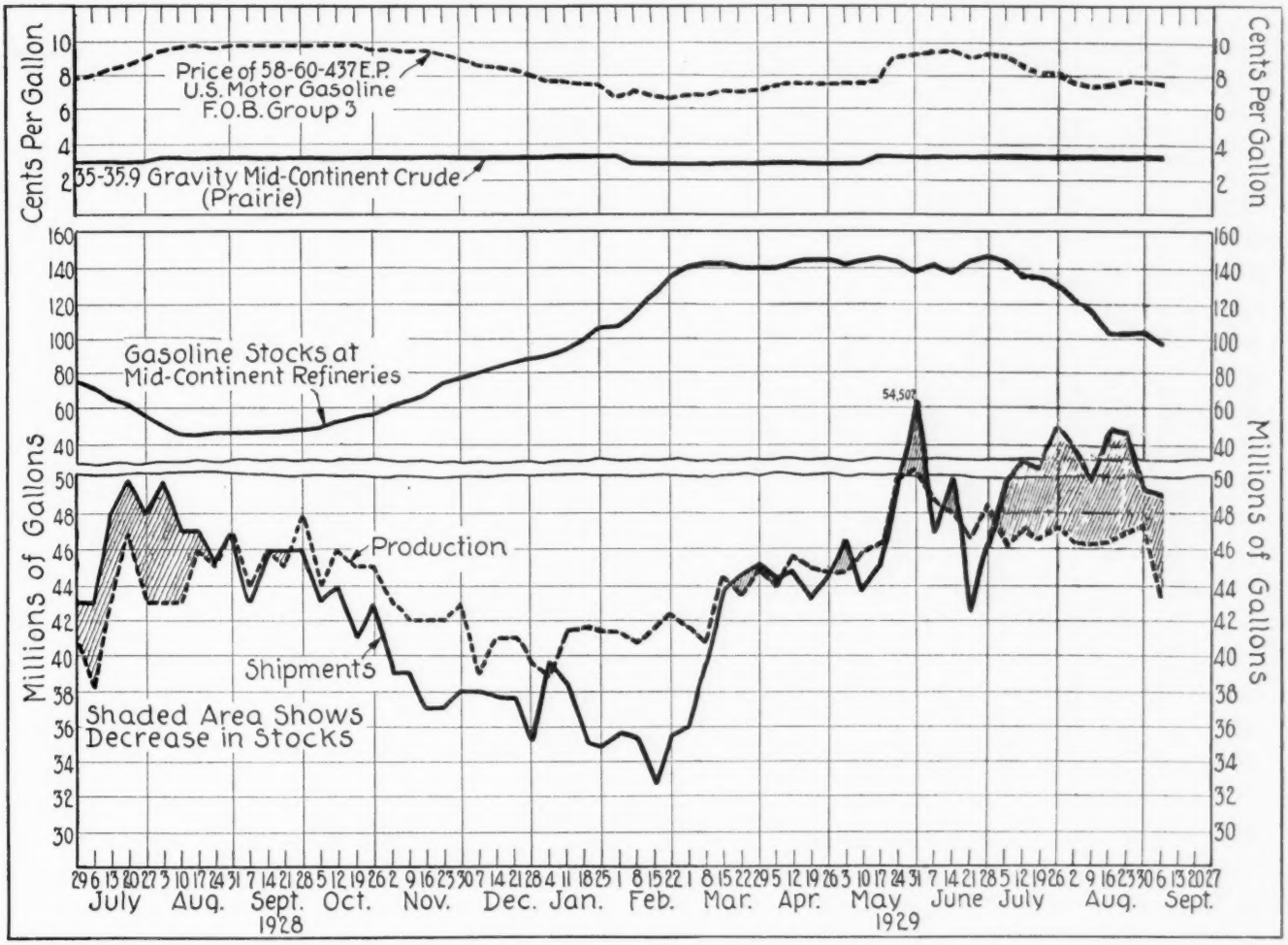
	Prices Sept. 9	Prices Sept. 3	Prices Aug. 26
58-60 U.S. Motor, 437 e.p.	7.25 – 7.75	7.50 – 7.75	7.50 – 7.75
60-62 437 e.p. gasoline	7.50 – 7.875	7.625– 7.875	7.625– 7.875
60-62 400 e.p. gasoline	7.625– 8.00	7.75 – 8.00	7.75 – 8.00
64-66 375 e.p. gasoline	8.125– 8.25	8.125– 8.25	8.125– 8.25

(Continued on Page 122)

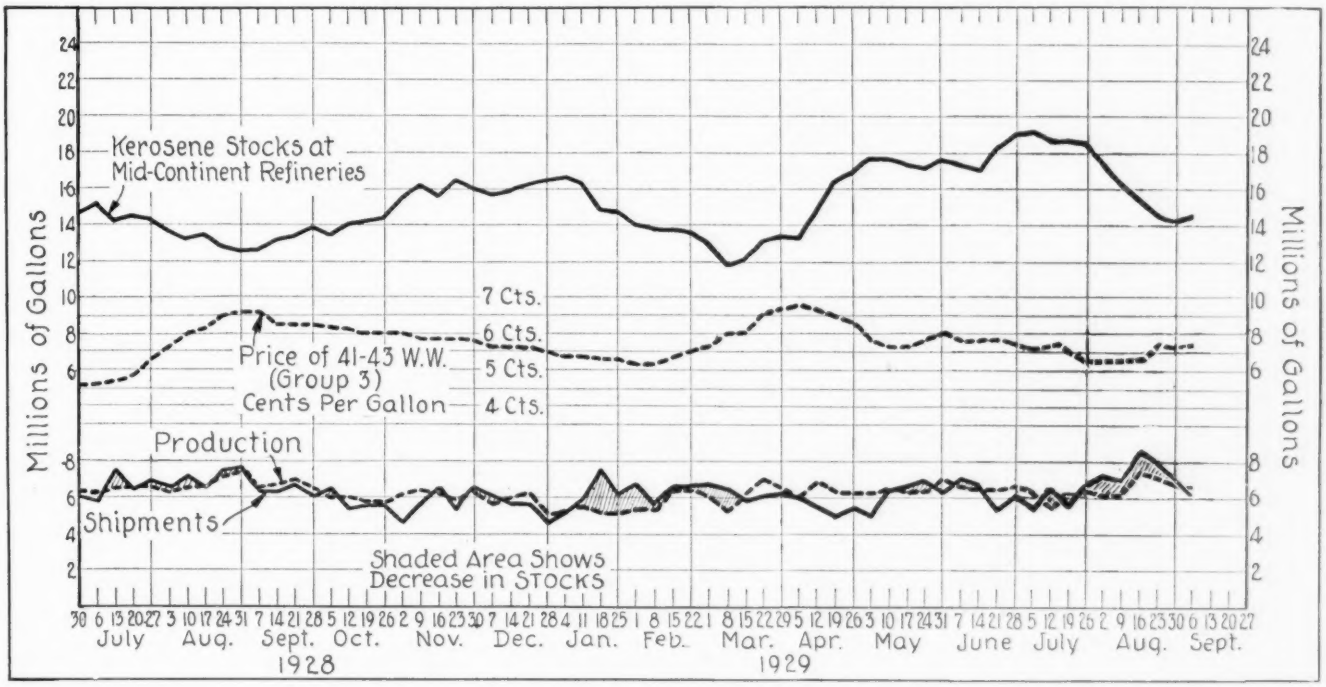
**Represents Both Sales and Quotations.

Barometer of Mid-Continent Refinery Market—Week Ending September 6

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Gasoline Stocks at Mid-Continent Refineries
54,507
Millions of Gallons
Production
Shipments
Shaded Area Shows Decrease in Stocks
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1928
1929

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 114



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

PENNSYLVANIA

	Prices Sept. 9	Prices Sept. 3	Prices Aug. 26
52-54 Naphtha	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
54-56 Naphtha	8.50 – 9.00	8.50 – 9.00	8.625– 9.00
58-60 U.S. Motor 437 e.p.	8.625– 9.25	8.75 – 9.50	8.75 – 9.50
60-62 400-410 e.p. gasoline	9.125– 9.50	9.125– 9.50	9.125– 9.50
64-66 390 e.p. gasoline	9.50 –10.00	9.50 –10.00	9.50 –10.00
68-70 Str-run gas 350-360 e.p.	10.25 –11.00	10.25 –11.00	10.25 –11.00

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline			
Ohio, delivery at any point	10.50	10.50	10.50

KANSAS (F. O. B. refinery Kansas destination)

60-62 400 e.p. gasoline	8.125– 8.25	8.00 – 8.25	8.00 – 8.25
64-66 375 e.p. gasoline	8.50	8.25 – 8.375	8.25

NORTH TEXAS

‡45-47 450 e.p. naphtha	6.75	6.75	6.75
56-58 450 e.p. gasoline	7.00 – 7.125	7.00	7.125
58-60 450 e.p. gasoline	7.00 – 7.125	7.00 – 7.125	7.125– 7.25
58-60 U.S. Motor 437 e.p.	7.00 – 7.375	7.00 – 7.375	7.375– 7.50
60-62 400 e.p. gasoline	7.50 – 7.625	7.50	7.50
64-66 390 e.p. gasoline	7.625– 7.75	7.50 – 7.75	7.50 – 7.75
64-66 375 e.p. gasoline	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
68-70 350-360 e.p. gasoline	8.125– 8.25	8.125– 8.25	8.125– 8.25

‡Gravity changed from 48-52 to 45-47 Aug. 12.

****WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)**

50-52 naphtha	6.75	6.75	6.75
56-58 437 e.p. gasoline	6.75 – 7.00	7.00	7.00 – 7.125
58-60 U. S. Motor 437 e.p. gasoline	7.00 – 7.25	7.00 – 7.375	7.25 – 7.50

NORTH LOUISIANA (N. La., Ark., and Miss. destination)

58-60 390 e.p. gasoline	8.00	8.00	7.75

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	8.00	8.00	7.75

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	7.25 –10.50	7.50 –10.00	7.50 –10.00
58-61 375-400 e.p. gasoline	10.50 –11.50	10.00 –11.00	10.00 –11.00
42-45 Engine Distillate 445-480 e.p.	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA

Grade AA, 80-87.9, 90% Recovery	6.25 – 6.50	6.50 – 6.75	6.75 – 7.00
Grade A, 72-79.9, 90% Recovery	6.375– 6.50	6.50 – 6.75	6.75 – 7.00
Grade BB, 84-92, 85% Recovery	6.125	6.25 – 6.75	6.75
Grade B, 76-83.9, 85% Recovery	6.125	6.25 – 6.75	6.75
Grade C, 80-90, 78% Recovery	6.125	6.25 – 6.75	6.75

NORTH TEXAS (F. o. b. Breckenridge)

Grade AA, 80-87.9, 90% Recovery	6.25 – 6.50	6.50 – 6.75	6.75 – 7.00
Grade A, 72-79.9, 90% Recovery	6.375– 6.50	6.50 – 6.75	6.75 – 7.00
Grade BB, 84-92, 85% Recovery	6.125	6.25 – 6.75	6.75
Grade B, 76-83.9, 85% Recovery	6.125	6.25 – 6.75	6.75
Grade C, 80-90, 78% Recovery	6.125	6.25 – 6.75	6.75

NORTH LOUISIANA (F. o. b. Monroe District)

Grade AA	†6.625	†6.75	†7.00
Grade BB	†6.25	†6.75	†6.875
Grade C	†6.25	†6.75	†6.875

CALIFORNIA

5-85, 375-390 e.p. blend	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00

†Prices nominal ††Only one refiner quoting *Quotations only

BURNING OILS

PENNSYLVANIA

	Prices Sept. 9	Prices Sept. 3	Prices Aug. 26
45 w.w. kerosene	6.375– 6.50	6.25 – 6.50	6.25 – 6.50
46 w.w. kerosene	6.75 – 7.00	6.75 – 7.00	6.50 – 7.00
47 w.w. kerosene	7.00 – 7.50	6.75 – 7.50	6.75 – 7.50
300 mineral seal	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

41-43 w.w. kerosene	5.375– 5.625	5.50 – 5.75	5.50 – 5.75

OKLAHOMA

41-43 w.w. kerosene	5.375– 5.625	5.375– 5.75	5.50 – 5.75
42-44 w.w. kerosene	5.75 – 6.00	6.00	5.875– 6.00

KANSAS (F. O. B. refinery Kansas destination)

41-43 w.w. kerosene	6.00 – 6.125	6.00 – 6.125	6.00 – 6.125
42-44 w.w. kerosene	6.25	6.125– 6.375	6.125– 6.375

NORTH TEXAS

40-42 w.w. kerosene	4.875– 5.00	5.00	5.125
41-43 w.w. kerosene	5.00	5.00 – 5.25	5.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosene	5.75	5.625– 5.75	5.75
42-44 w.w. kerosene	6.00	6.00	6.00

ARKANSAS (Ark., N. La. and Miss. destination)

41-43 kerosene			5.75
42-44 kerosene	6.00	6.00	6.00

CALIFORNIA

38-40 w.w. kerosene	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50

NEUTRAL OIL

PENNSYLVANIA

Vis.	(Viscosity at 70°F.)		
200 No. 3 Assoc. Filt.	25.50 –27.50	25.50 –27.50	25.50 –27.50
180 No. 3 Assoc. Filt.	22.50 –25.00	22.50 –25.00	23.00 –25.00
150 No. 3 Assoc. Filt.	16.50 –18.50	17.00 –18.50	17.00 –18.50
	(Non Viscous)		
34 Grav. 330-340 Flash	7.50 – 7.75	7.50 – 7.75	7.50 – 7.75

****OKLAHOMA**

Vis. Color	(Viscosity at 100°F.)		
100—No. 2	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
150—No. 3	7.50 – 8.25	7.50 – 8.25	7.50 – 8.25
150—No. 4	6.75 – 7.50	6.75 – 7.50	6.75 – 7.50
180—No. 3	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
180—No. 4	8.75 – 9.25	8.75 – 9.25	8.75 – 9.25
180—No. 5	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
200—No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200—No. 4	9.00 –10.25	9.00 –10.25	9.00 –10.25
200—No. 5	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.00 –12.50	12.00 –12.50	12.00 –12.50
220—No. 5	11.00 –12.00	11.00 –12.00	11.00 –12.00
240—No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
240—No. 4	12.00 –13.00	12.00 –13.00	12.00 –13.00
240—No. 5	11.00 –13.00	11.00 –13.00	11.00 –13.00
280—No. 3	14.00 –16.00	14.00 –16.00	14.00 –16.00
280—No. 4	13.00 –15.00	13.00 –15.00	13.00 –15.00
280—No. 5	12.00 –14.00	12.00 –14.00	12.00 –14.00

****Represents both sales and quotations.**

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL

Vis.	Color	Prices Sept. 9	Prices Sept. 3	Prices Aug. 26
		(Viscosity at 100°F., pour test 0		
100	No. 2 Pale	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
200	No. 3 Pale	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
300	No. 3 Pale	10.00 –10.50	10.00 –10.50	10.00 –10.50
500	No. 3½ Pale	11.50 –12.00	11.50 –12.00	11.50 –12.00
750	No. 4 Pale	12.50 –13.00	12.50 –13.00	12.50 –13.00
200	No. 5½ Red Oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300	No. 5½ Red Oil	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
500	No. 6 Red Oil	10.00 –10.50	10.00 –10.50	10.00 –10.50
750	No. 6 Red Oil	11.50 –12.00	11.50 –12.00	11.50 –12.00

CALIFORNIA

Vis.	Color		(Viscosity at 100°F.)	
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50	11.50	11.50
300	No. 3	13.00	13.00	13.00
450	No. 3	15.50	15.50	15.50
550	No. 3	16.50	16.50	16.50
600	No. 3	17.00	17.00	17.00
200	No. 5	11.00	11.00	11.00
300	No. 5	12.00	12.00	12.00
400	No. 5	14.00	14.00	14.00
500	No. 5	15.00	15.00	15.00
600	No. 5	16.00	16.00	16.00
700	No. 7	18.00	18.00	18.00

CYLINDER STOCKS

**OKLAHOMA

190-200 Vis. D at 210° Brt. St.	37.00 –41.00	37.00 –41.00	37.00 –41.00
150-160 Vis. D at 210° Brt. St.	36.00 –38.00	36.00 –38.00	36.00 –38.00
150-160 Vis. E 210° Brt. St.	33.00 –34.00	33.00 –34.00	36.00
600 St. Ref. Olive Green	12.00 –16.00	12.00 –16.00	12.00 –16.00
600 St. Ref. Dark Green	11.00 –15.00	11.00 –15.00	11.00 –15.00
Black Oil	5.00	5.00	5.00

PENNSYLVANIA (A. S. T. M. Tests)

600 Steam Refined, filterable	22.50 –24.00	22.00 –24.00	23.00 –25.00
650 Steam Refined	28.50 –29.00	28.00 –29.00	27.00 –30.00
600 Flash	30.00 –33.00	30.00 –32.00	30.00 –33.00
625 Flash	35.00 –37.00	35.00 –37.00	35.00 –37.00
600 Warren E	32.50 –33.00	33.50 –34.00	33.50 –34.00
600 Oil City E	30.50 –32.50	30.50 –32.50	30.00 –32.50
600 D Filtered	37.00	37.50 –38.00	37.50 –38.00
Cold Test Stock, 40-50p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	53.00	52.00 –53.00	52.00 –53.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	50.00 –52.00	49.00 –51.00	50.00 –51.00

WAX

PENNSYLVANIA (Per pound, New York)

122-124 white crude scale, a.m.p.	3.00	2.90 – 3.00	2.875– 3.00
124-126 white crude scale, a.m.p.	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125

OKLAHOMA

**124-126 White Crude Scale, a. m. p.	2.75 – 3.00	2.75 – 2.875	2.625– 2.75

CALIFORNIA

White crude scale, per pound, ton lots, a.m.p.	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	4.375– 4.625	4.25 – 4.50	4.25 – 4.375
30-34 fuel oil	4.125– 4.25	4.125– 4.25	4.125
28-32 fuel oil	4.125– 4.25	4.125– 4.25	4.125

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

	Prices Sept. 9	Prices Sept. 3	Prices Aug. 26
38-40 straw distillate	3.625– 3.75	3.50 – 3.75	3.50 – 3.625
32-36 ordinary dark gas oil	2.625	2.50 – 2.625	2.50 – 2.625
32-36 dark zero gas oil	2.75	2.625– 2.75	2.625– 2.75
32-36 straw zero gas oil	†3.00	†2.875– 3.00	†2.75 – 2.875
28-30 zero fuel oil	$1.00 –$1.025	$0.95 –$1.00	$0.95 –$0.975
28-30 fuel oil	$0.95 –$1.00	$0.90 –$0.95	$0.90 –$0.925
24-26 fuel oil	$0.75 –$0.775	$0.70 –$0.725	$0.70 –$0.725
18-22 fuel oil, low sulfur	$0.60 – 0.625	$0.575–$0.625	$0.575–$0.60
18-22 fuel oil, high sulfur	$0.575– 0.60	$0.55 –$0.575	$0.55 –$0.575

OKLAHOMA

38-40 straw distillate	3.625– 4.00	3.625– 3.875	3.50 – 3.75
36-38 straw distillate	3.50	3.50	3.375– 3.50
32-36 straw gas oil	2.625– 2.875	2.625– 2.75	2.625– 2.75
32-36 dark gas oil	2.50 – 2.75	2.50 – 2.625	2.50 – 2.625
32-36 straw zero gas oil	2.75 – 3.00	2.75 – 2.875	2.75 – 2.875
28-30 zero fuel oil	$0.95 – 1.00	$0.950– 0.975	$0.95 – 0.975
28-30 fuel oil (in bbls.)	$0.90 – 0.95	$0.875– 0.925	$0.875– 0.925
26-28 fuel oil (in bbls.)	$0.80 –$0.85	$0.80 – 0.85	$0.80 – 0.85
24-26 fuel oil (in bbls.)	$0.75 – 0.80	$0.75 – 0.80	$0.75 – 0.85
22-26 fuel oil (in bbls.)	$0.625–$0.65	$0.625– 0.65	$0.60 – 0.65
18-22 fuel oil (in bbls.)	$0.60	$0.55 – 0.60	$0.55 – 0.60
‡16-20 fuel oil (in bbls.)	$0.50 – 0.55	$0.50 – 0.55	$0.50 – 0.55
14-16 fuel oil (in bbls.)	$0.50 – 0.525	$0.475– 0.525	$0.475– 0.525

‡Gravity changed from 16-18 to 16-20, Aug. 19.

KANSAS (F. O. B. refinery Kansas destination)

38-40 straw distillate	3.75 – 4.00	3.75	3.50 – 3.75
36-38 straw distillate	3.50 – 3.625	3.50 – 3.625	3.50
32-36 gas oil	2.875– 3.00	2.625– 2.75	2.625– 2.75
18-22 fuel oil	$0.60 –$0.65	$0.575–$0.65	$0.575– 0.65
10-14 fuel oil	$0.50 – 0.55	$0.50 –$0.55	$0.50 – 0.55

NORTH TEXAS

38-40 straw distillate	3.50 – 3.625	3.375– 3.625	3.375– 3.50
32-36 gas oil, cracked	2.375– 2.50	2.375– 2.50	2.375– 2.50
32-36 St. reduced gas oil	2.50 – 2.625	2.50 – 2.625	2.50 – 2.625
24-26 fuel oil (in bbls.)	$0.625– 0.65	$0.625– 0.65	$0.625– 0.675
20-24 fuel oil	$0.625– 0.65	$0.625– 0.65	$0.625– 0.65

**WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)

34-38 gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
30-32 gas oil	2.25 – 2.375	2.25 – 2.50	2.25 – 2.50
18-22 fuel oil	$0.50	$0.425– 0.50	$0.425– 0.50

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	3.00 – 3.125	3.00	2.875– 3.00
32-36 gas oil, straw	3.125– 3.25	3.00	3.00
14-16 fuel oil (in bbls.)	$0.70 – 0.80	$0.70 – 0.80	$0.70 – 0.80

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil, straw	3.125– 3.25	3.00	3.00
32-36 dark gas oil	3.00 – 3.125	3.00	2.875– 3.00
28-30 gas oil	2.75 – 3.00	2.625– 2.875	2.625– 2.875
14-16 fuel oil	$0.70 –$0.80	$0.70 – 0.80	$0.70 – 0.80

CALIFORNIA (F. o. b. San Joaquin Valley. At San Francisco, 4c per bbl. more)

14-18 fuel oil (per bbl.)	$0.50 –$0.60	$0.50 –$0.60	$0.50 –$0.60
14-18 Bunker oil (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
30-34 gas oil (per bbl.)	$0.85 –$1.05	$0.85 –$1.05	$0.85 –$1.05
27 Plus Diesel oil (per bbl.)	$0.85 –$0.95	$0.85 –$0.95	$0.85 –$0.95

PETROLATUMS

PENNSYLVANIA (In barrels, carload lots, f. o. b. refinery. In tank cars ½c to ¾c per pound less.) Two refiners quoting.

Snow White	8.50	8.50	8.50
Lily White	7.50 – 7.75	7.50 – 7.75	7.50 – 7.75
Cream White	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
Light Amber	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
Amber	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
Red	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25

PETROLEUM COKE

**OKLAHOMA

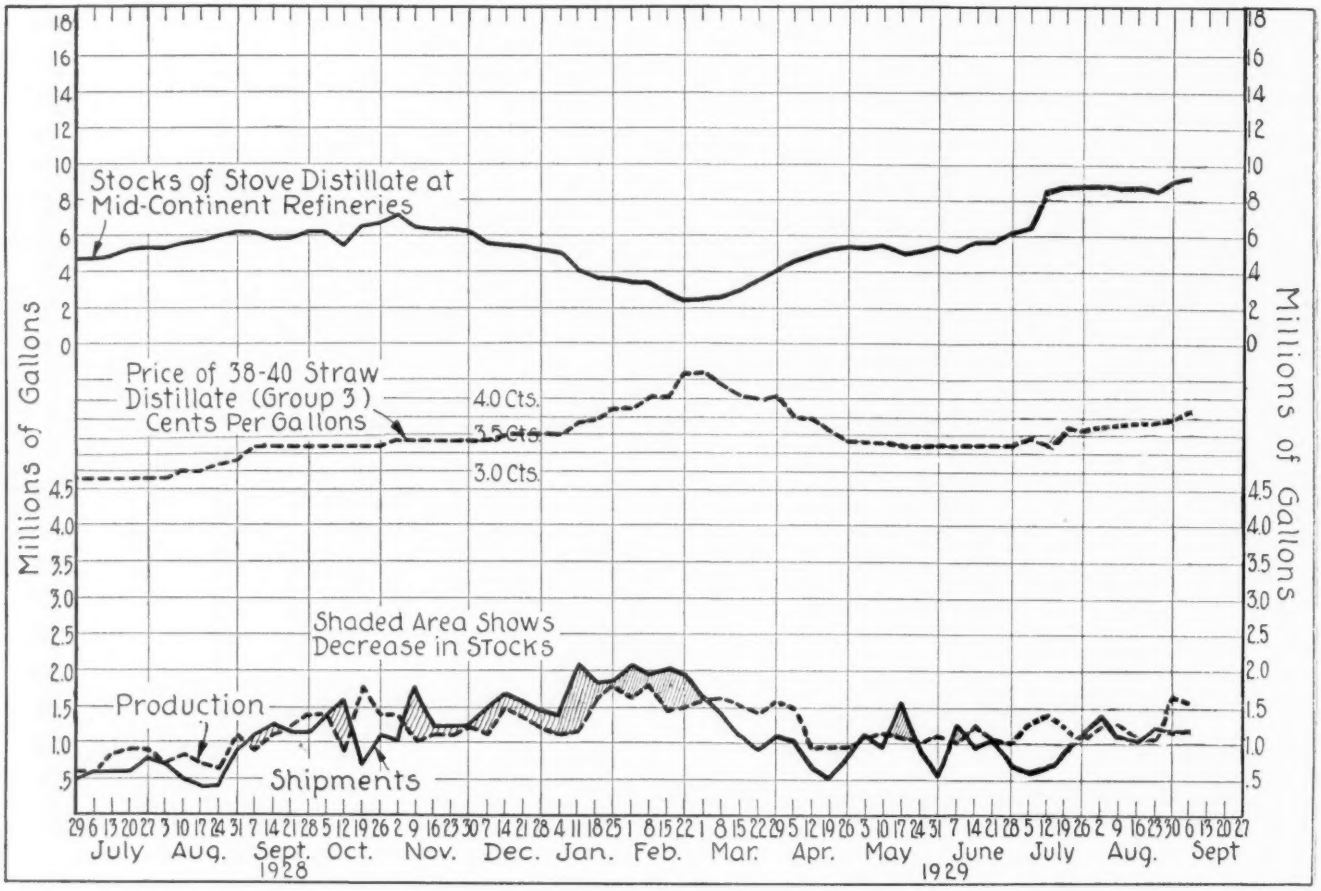
(Per ton in car lots)

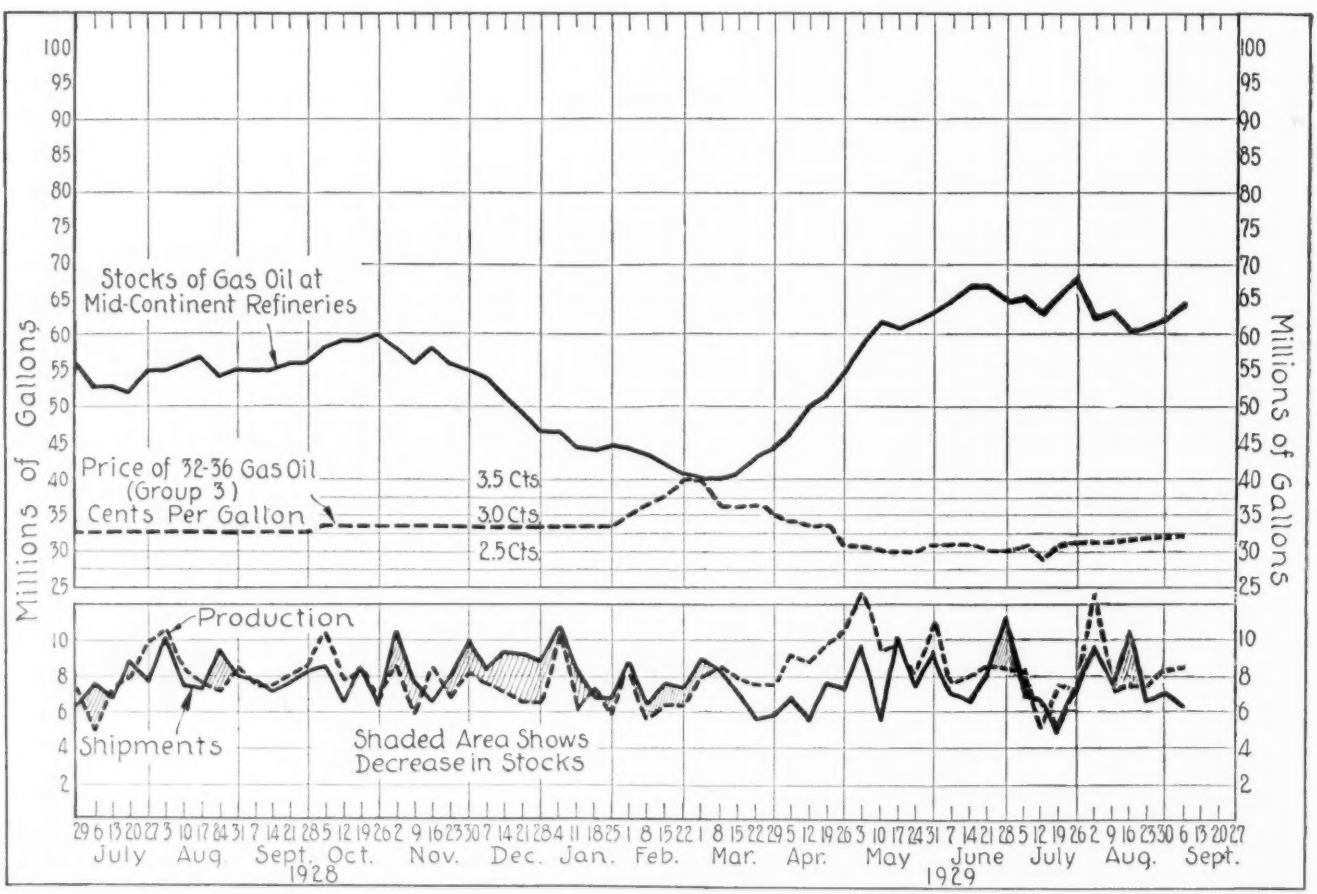
Lump	$4.50 – 5.00	$4.50 –$5.00	$4.50 – 5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

†Prices Nominal ††Only One Refiner Quoting *Quotations only **Represents both sales and quotations

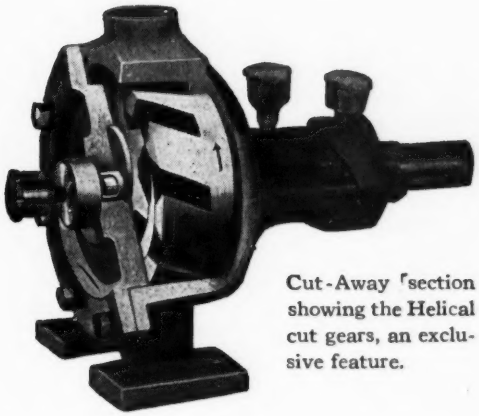
Barometer of Mid-Continent Refinery Market—Week Ending September 6

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Stocks of Stove Distillate at Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallons
4.0 Cts.
3.5 Cts.
3.0 Cts.
Shaded Area Shows Decrease in Stocks
Production
Shipments
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept
1928
1929


Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) Cents Per Gallon
3.5 Cts.
3.0 Cts.
2.5 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1928
1929

Why Helical Gears in a Rotary Pump?



Cut-Away section showing the Helical cut gears, an exclusive feature.

IT is very generally accepted that a rotary pump is preferable to a reciprocating pump for transferring large quantities of liquids at low power cost. In a reciprocating (piston type) pump it takes extra power to start the load at the beginning of each piston stroke. In a rotary pump when the liquid is started it is carried around a part of a circle. There is no stopping and starting but an even continuous flow. It is easy to understand why it takes less power and every mechanic understands, too, that a non-fluctuating load saves the motor.

The Perfection is the only rotary pump in which the Helical gear principle is embodied. The pump mechanism is extremely simple, with only two moving parts, the helical internal gear rotor and the helical idler gear or pinion. The teeth in the idler pinion intermeshing with the teeth in the rotor act like a series of pistons in rotating cylinders, sucking the liquid in the intake opening on the side, carrying it around and discharging it through the outlet at the top. (See cut-away illustration).

THE Helical shape of the gears prevents back lash and is preferable to the spur gear because it runs more quietly and smoothly. With helical gears there is not the shocking action and strain on the pump that is produced by the straight-on mesh of spur gears. The teeth of the Rotor in the Perfection Pump cut through the liquid on an angle with a shearing cut instead of head on.

The Perfection Rotary Pump is made in sizes from 3 to 90 gallons per minute. It is ideal for unloading oil or gas. Replace your old unloading pump with a Perfection. It will save you time, money and power, and will give you satisfactory service.

Write for Bulletin No. 271 and prices. The Perfection Rotary Pump has some special features that are well worth looking into.

Perfection Manufacturing Company

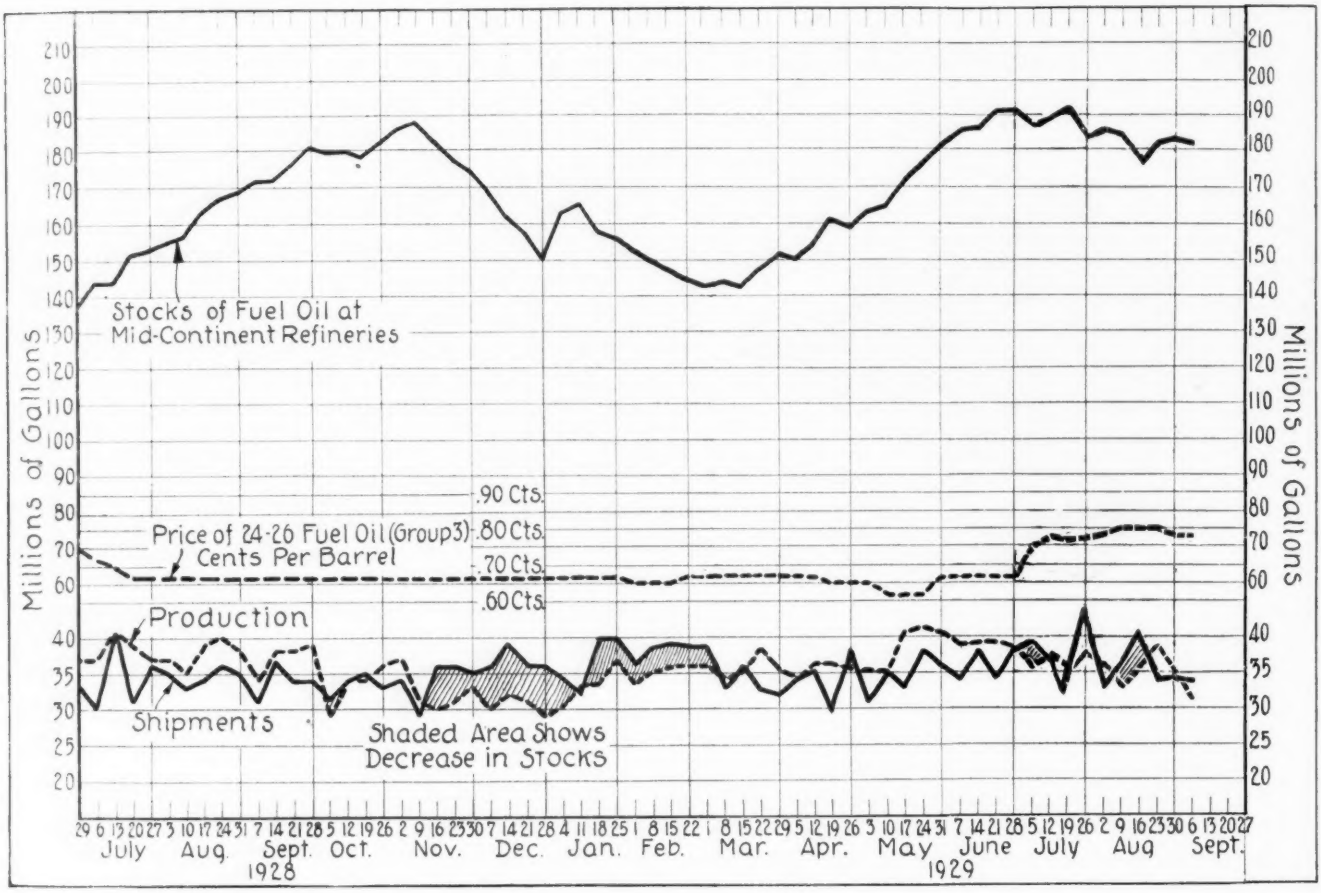
2194 East Hennepin Avenue,
Minneapolis, Minn.

Type 6—A Twin Gear Drive unloading Pump with Motor.

PERFECTION
ROTARY PUMPS

Barometer of Mid-Continent Refinery Market—Week Ending September 6

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



California Refinery Market

U. S. Motor Cargo Brings 6.50 Cents

LOS ANGELES, Sept. 5

CALIFORNIA markets showed little promise of being elevated from the rut into which they have continued during the past month. Spot sales were few and far between and inquiries were not sufficient in number to raise the hope of increased trade within the near future.

Export quotations remained as for the week ending Aug. 29 except for U. S. Motor gasoline and gas oil. With the exception of one cargo of gasoline sold last week, there has been hardly enough export trade to warrant a change in the price. Local shippers believe that this commodity could be purchased as low as 6.50 cents or at least 6.75 cents. This latter figure is one cent under Gulf export prices, which is the usual differential that exists between California and Gulf export gasoline prices.

It was reported that the cargo of gasoline sold was purchased at a price of 8.50 cents c.i.f., New York harbor. Figuring that if a tanker was obtained for the reported price of about 85 cents per barrel or slightly more than 2 cents per gallon, the gasoline must have been purchased for 6.50 cents or less to ensure not taking a loss on the Atlantic Seaboard.

California shippers were still optimistic over the possibilities of an increase in trade before the first of October. Tanker rates are expected to ease off within the next week or so.

Tank car shipments to out-of-state destinations continued to be very light, consisting mostly of fuel oil and gasoline. Out-of-state gasoline moved at from 7.25 to 8 cents with a report of some that was sold at a shade under 7.25 cents.

Instate gasoline, although quoted at from 9.50 to 10.50 cents, tax excluded, had very little activity in spot sales. Independent refiners were reported to have been selling their surplus gasoline to larger interests at a price of 10 cents. This action on the part of the small operators kept spot sales at a minimum in the state, as it withdraws excess gasoline from the market.

Kerosene was inactive with only a few spot sales reported. One dealer stated that this could be purchased for as low as 4.75 cents.

Fuel oil prices continued relatively low with one sale reported at the low figure of 45 cents per barrel. Quotations ranged at from $0.50 to $0.60 per barrel.

Station Men Meet

CLEVELAND, Sept. 7.—Service station employees of the Shaffer Oil & Refining Co. are being shown the advantages of Ethylized gasoline at a series of regional meetings arranged since Shaffer began using the anti-knock compound. A representative of the Ethyl Gasoline Corp. gives a demonstration at each meeting. The Shaffer product is known as Kant-Knock Ethyl.

Pennsylvania Market

Gasoline Steady After T. W. Cut

CLEVELAND, Sept. 9.—Tank car prices for gasoline had already discounted the 1 cent cut in tank wagon announced Sept. 9 by the Atlantic Refining Co., according to the reports of most sellers in the western Pennsylvania market. A thorough check of the market revealed no change in quotations by the large majority of sellers. U. S. Motor, which was offered in one or two directions from Friday of last week on at 8.625 cents, maintained this as the low quotation Monday.

There were varied reports as to the demand for gasoline. Some sellers reported they were doing an exceptionally good business; orders from their regular customers were in larger volume than they had anticipated, and due somewhat to curtailed production, they had been forced to buy some of their contract commitments in the open market. Other sellers reported that while they had found demand for gasoline relatively light, a much better demand for cylinder oils and heavy burning oils had compensated for it to a great extent.

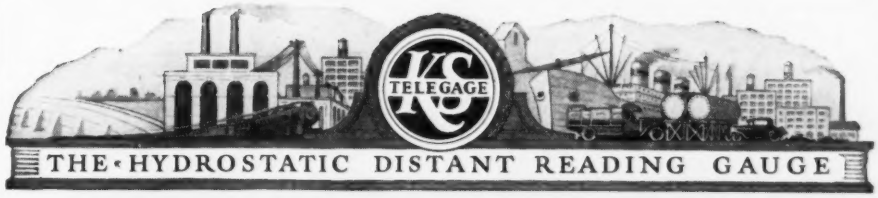
An upward movement in prices for cylinder oils got under way about the middle of last week and at the close, minimum quotations for steam refined stocks were 1 to 2 cents higher than when the market opened Sept. 3.

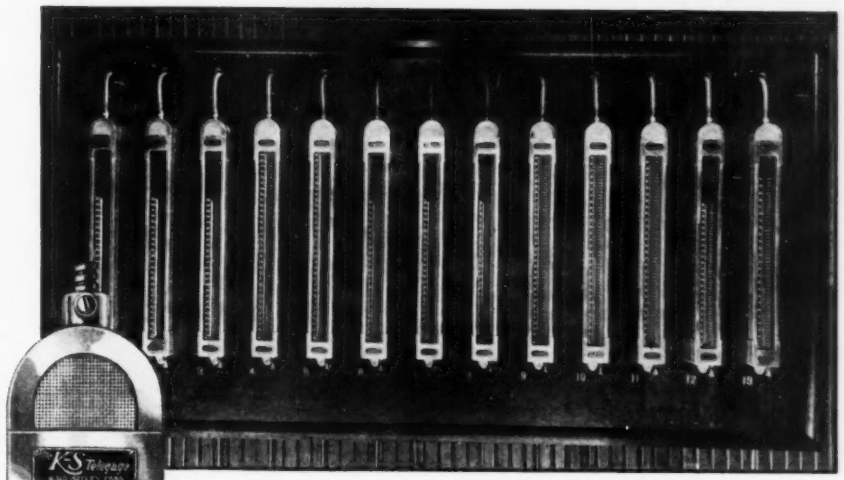
Filterable 600 steam refined was less freely offered under 23 cents on Saturday. Refiners offering goods at this price also stated they had only odd lots that they were willing to dispose of at 22.50 to 22.75 cents. The 650 steam refined offered at under 28 cents early last week had disappeared from the market completely by Saturday.

Prices for kerosene and fuel oil also continued their upward trend begun a week ago. There were a number of large sales of 36-40 fuel oil reported at prices 0.125 to 0.25-cent higher. Early fall demand from domestic burner oil distributors together with continued good demand from refiners for cracking stock were given as reasons for the flurry in fuel oil prices.

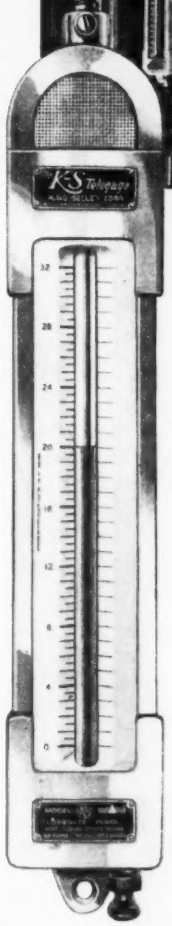
There was no change in the bright stock situation. Most manufacturers continued to report that they were well sold up for the balance of September. Only odd cars of No. 8 color oil were offered for prompt shipment and No. 6 to 6½ color diluted oil was equally as scarce. The excellent technical position of bright stock, however, failed to cause any upward movement in prices. A nominal price of 53 cents was quoted for the lighter grade and 50 to 52 cents was quoted for the darker grade.

Prices for neutral oils and wax were generally unchanged.





Battery of thirteen Telegages on instrument board of Peerless Oil Co., Elyria, Ohio, used for checking contents of large gasoline storage tanks.



How to Make Your Men More Careful

THE continual waste of petroleum products during handling—in small quantities that add up to heavy losses—is greatly reduced when men know that you have a quick and accurate means of checking each tank and its contents, so that loss is quickly discovered and checked.

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Write for complete information, giving a full description of your requirements. Give the Baume or Specific Gravity of each liquid to be measured, the distance from tank to desired location of gauge, and size of tank. Descriptive folder sent on request.

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Chicago: 471 Wrigley Bldg.

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BE CERTAIN WITH THE *K–S TELEGAGE*

Standard factory equipment on three-fourths of all cars selling for $700 or more.

New York Domestic Market

Seaboard Gasoline Continues Downward

Staff Special
NEW YORK, Sept. 7

EASTERN gasoline markets the past week were again featured by lower prices, making the third consecutive week that prices have fallen off. The reduction was general along the seaboard, a 0.25 to 0.50 cent decline in quotations having been reported in principal areas.

Prices at New York harbor were the first to fall, quotations ranging from 8.75 to 9 cents at the close of the week, a drop of 0.25-cent. All other districts reported a 9 cent price.

The lower prices were the result, the trade said, of recent reductions in tank wagon prices and of the large amount of gasoline in storage, which has caused some distress goods to be offered on the market.

Tank wagon gasoline prices in the Metropolitan district have assumed virtually the same status that they had before the recent 3 cent reduction by the Standard of New York. One company that has been reported consistently underselling most companies here by 2 cents, made a reduction in that amount making its price 14 cents. It is also reported that the company is delivering gasoline to industrial accounts in the city, at 10 cents per gallon and, in several instances, has made sales below that figure.

Several of the trade reported that they expected to see the "cut-price situation" rectify itself in the next few weeks, as it had been authentically reported that this company intended to quit selling the cheaper, or "competitive" grade of gasoline, and would market only its special product which brings the same price as the Standard of New York's regular brand. Such a move, the trade pointed out, would eliminate "cut-price competition" in soliciting business from one of New York's largest gasoline buyers, which not only purchases in tank wagon but tank car as well.

There was some shading reported at New York as the week closed and the bottom price of 8.75 cents per gallon in tank cars was not considered on a sound foundation. Some barge business has been reported—small in volume—at 8.50 cents. One seller indicated that he would take tank car business on that basis providing the order was large. So far, it was reported, this business has been confined to jobbers who were able to pay cash for their gasoline.

The Philadelphia market also was unsettled partly due to the 1-cent tank wagon and service station reduction which the Atlantic Refining Co. made in Pennsylvania and Delaware, Sept. 9. Until Sept. 5 suppliers there were obtaining a fair amount of business at 9.25 cents and no shading of that figure had been reported. Friday they had lowered their price, principally to meet competition in upper New York state where freight rates are practically the same as from Bayonne.

Other commodities were unchanged in price although there was some improvement noticed in the kerosene market. Spot orders were a trifle more numerous, due to the seasonal demand. One seller at New York raised his price to 8 cents.

There was one instance of shading reported for bunker oil. A seller said that an account had told him he could buy for $0.90 per barrel, while the market was generally quoted at $1.05. He said that while the customer had not returned when he refused to meet that price, he had been unable to find the source of the quotation. The market has been at $1.05 for several weeks and while there has been no rushing business, stocks have not been great enough, it was said, to warrant a reduction in the price.

Gulf Coast Market

Foreign and Domestic Buyers Inactive

Staff Special
NEW YORK, Sept. 7

THERE were no bulk cargoes of gasoline sold at the Gulf during the past week and no inquiries were in the market. Quotations for all commodities were unchanged.

An inquiry that was reported during the week of Aug. 31, was placed late that same week after having been reported as open. A leading Independent refiner accepted an order from a French buyer Aug. 31, for a cargo of approximately 70,000 bbls. of U. S. Motor, 64-66, 375 e.p. gasoline, 41-43 p.w. and 44 w.w. kerosene, for shipment early in September.

When the week ended Aug. 31, it was known that the company which accepted the business was negotiating for it, but it was not reported closed until the following week. The transaction was made on the basis of prices established for those commodities by the Export Petroleum Association.

A number of suppliers at New York feel that there will be no unusual activity in the bulk market on gasolines probably for the next 30 days. They have reported that French buyers are known to be rather well stocked and should they desire a spot cargo, it is more than possible that requirements would not be filled from the United States, as prices here are higher than in European refining centers. One of the largest French buyers who, in times of necessity is said to have resold goods to other French accounts, is reported out of the market for at least the next 30 days. It is also said that United Kingdom buyers are well situated in regard to stocks.

The domestic gasoline market at the Gulf also has been inactive. Mid-Continent refiners, who a few weeks ago largely governed the price, have relegated their position to California. Gulf prices followed Mid-Continent prices down a few weeks ago but the latter have now regained lost ground and goods cannot be bought there at a profitable figure with the Gulf market for U. S. Motor at 7.50 cents per gallon. However, with California goods available for shipment to the east coast at 8.50 cents delivered, Gulf refiners have been unable to raise their price. A broker reported that with a firm offer he believed he could do 7.375 cents at the Gulf.

High tanker rates have had some bearing on the inactivity of the domestic market and also on the California market. While inter-coastal and coastwise fixtures are easier, there is no depression noted in the high levels established some weeks ago.

RICHMOND, Va., Sept. 5.—Bids for the gasoline and lubricating oil requirements of the state highway department for six months ending April 15 will be received until noon Sept. 17. It is estimated the expenditure will be about $250,000. Bids are being sought on 1,174,800 gallons of gasoline and 60,000 gallons of lubricating oils.

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MOTOR OIL
White Rose
GASOLINE

YOU will make money if you handle these nationally advertised brands.

All grades of lubricating oils and greases.

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Regardless of how much or how little gasoline or oil passes through a Niagara meter, it accurately registers and records, preventing loss, theft or favoritism.

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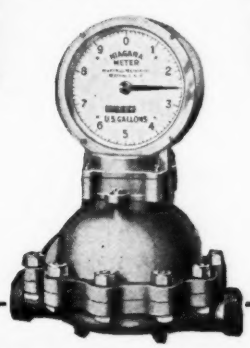


BUFFALO METER COMPANY
2889 Main St., Buffalo, N. Y.

Wax Market

White Crude Scale Steady

NEW YORK, Sept. 7.—Both foreign and domestic buyers failed to exhibit any interest in the market the past week and, as a result, there were very few transactions made. Quotations on all grades were unchanged.

Suppliers continued to report that while there had been very little spot business, the contract movement had been good. They entertained the same opinions of last week—that the seasonal demand will probably bring buyers in the market some time this month, resulting in higher prices. Several were quoting slightly higher prices for white and yellow crude scale at the close of last week.

White crude scale was generally quoted at 3 cents and yellow at 2.75 to 2.875 cents. Fully refined quotations ranged from 4 to 4.25 cents on the lower melting point goods, to 6.25 to 6.50 cents on 135-137 A.m.p. Two sellers were of the opinion that 3.125 cents was the market for white scale. A seller of yellow scale reported he would re-enter the market the third week in September offering goods at 3 to 3.125 cents. He withdrew from the market some weeks ago during the period of lower prices.

Figures of the Bureau of Mines show that wax stocks during the month of July increased approximately 2,500,000 pounds although there was less goods manufactured by approximately 200,000 pounds.

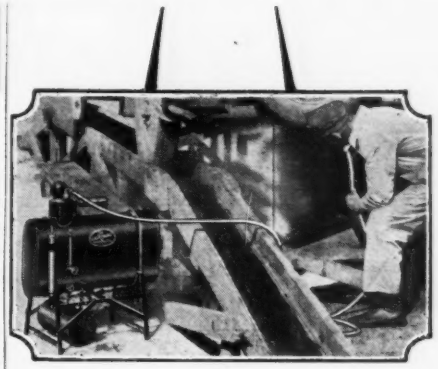
Gulf Lubes Unchanged

HOUSTON, Sept. 7.—Gulf Coastal lubricants markets continued throughout the week to show the in-between season quiet recently prevailing. There have been no further revisions of price schedules since those placed in effect about the middle of August. Manufacturers are looking ahead for increased business as winter demand materializes for zero cold test grades.

Correction

Prices of U. S. Motor gasoline at Charleston, Savannah and Jacksonville districts in the Eastern Domestic Market as published on page 122 of the Sept. 4 issue of NATIONAL PETROLEUM NEWS were in the error at 9.00 to 9.25 cents, as of Sept. 3. Correct prices on Sept. 3 at the three points were 9.00 to 9.50 cents.

Lewis-Shepard Co., Boston, has purchased a brick building at Crawfordsville, Ind., to be used as a midwestern manufacturing plant. Production is expected to begin about Oct. 1.



More Grease SOLD *and* Faster Work

make sure of a thorough job

Cold weather presents a problem to most station operators by congealing the grease in transmissions and differentials. To solve this problem the "Lightning" Liquefier was built.

Here is a machine ideally adapted for every service station. The "Lightning" Liquefier is a portable outfit that quickly generates steam at low pressure and continuously furnishes it in large enough volume to speedily liquefy grease so that it will flow out like water.

The profit in grease is good and here is a process that builds up volume. By this process every bit of the old grease is removed, allowing a clean, complete change to be made. The result is more satisfactory to the car owner and a larger profit to you.

Live Steam

Steam is the ideal heat carrying medium. It holds advantages over anything yet known that has been tried for liquefying grease. It is time tested and has proved its superior qualities in sections where the thermometer registers from zero down for several weeks of the winter season.

Engineers have proved that steam is quicker and more satisfactory than any other method of liquefying congealed grease.

With the "Lightning" the steam fills the housing and acts on the grease between the gears and throughout the entire housing.

Many other uses that bring profits and build good will are thawing out radiators, oil lines, pumps, clogged oilers, etc.

You will be surprised how low the cost and how quickly these machines pay for themselves.

Write for the facts

WARNER MFG. CO.
MINNEAPOLIS, MINN.

The LIGHTNING LIQUEFIER
for COLD CONGEALED GREASE

Complete Seaboard Market

(Export Markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of quotations.)

U. S. MOTOR GASOLINE	Sept. 9	Sept. 3	Aug. 26
New York harbor	8.75– 9.00	9.00	††9.00 – 9.50
Portland district	**10.25–10.75	**10.50–10.75	**10.50–10.75
Boston district	** 9.75–10.25	**10.00–10.25	**10.00–10.25
Providence district	** 9.75–10.25	**10.00–10.25	**10.00–10.25
Philadelphia district	9.00	9.00 – 9.25	9.50
Baltimore district	9.00	9.00	9.50
Norfolk district	9.00	9.00 – 9.25	9.50
Charleston district	9.00	9.00 – 9.50	9.50
Savannah district	9.00	9.00 – 9.50	9.50
Jacksonville district	9.00	9.00 – 9.50	9.50
CALIFORNIA, U. S. MOTOR GASOLINE			
New York harbor	9.25	9.25	9.50
Philadelphia district	9.00	9.25	9.50
Baltimore district	9.25	9.25 – 9.50	9.50 – 9.75
WATER WHITE KEROSENE			
New York harbor	7.75	7.75	7.75
Philadelphia district	7.50 – 7.75	7.50 – 7.75	7.75
Baltimore district	7.75	7.75	7.75
GAS OIL: 28-34 Gravity			
New York harbor	4.75	4.75	4.75
Boston district	4.75	4.75	4.75
FURNACE OIL: 36-40 Gravity			
New York harbor	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
Boston district	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
GRADE C BUNKER OIL†			
New York harbor	$1.05	$1.05	$1.05
Boston district	$1.05	$1.05	$1.05
DIESEL OIL			
New York harbor	$2.00 –$2.10	$2.00 –$2.10	$2.00 –$2.10
MEDICINAL OILS, RUSSIAN			
.885-890 s.g. 320-330 vis.	$0.82 – 0.97	$0.82 – 0.97	$0.82 – 0.97
.870-875 s.g. 145-155 vis.	$0.74 – 0.89	$0.74 – 0.89	$0.74 – 0.89

Note: Above gasoline prices do not include inspection tax levied in some states
*Minimum delivered. **Delivered prices. †Lighterage 5c per bbl. additional
††Nominal.

New York Export Market

(Lubricating oils are per gal. in bbls.)

	Sept. 9	Sept. 3	Aug. 26
CYLINDER OILS (Pennsylvania Products)			
Bright stock, dark	57.00 –59.00	56.00 –59.00	57.00 –59.00
600 D filtered	41.00 –44.00	44.00	44.00 –46.00
600 Warren E filtered	40.00 –41.00	38.00 –40.00	42.00
600 s.r. unfiltered	27.00 –30.00	27.00 –30.00	30.00 –33.00
650 s.r. unfiltered	34.00 –36.00	36.00 –39.00	36.00 –39.00
600 flash, s.r.	35.00 –38.00	38.00 –40.00	40.00 –43.00
630 flash, s.r.	40.00 –43.00	43.00 –45.00	45.00 –47.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00 –21.00	20.00 –21.00	20.00 –21.00
250 vis. No. 6 color	18.00 –20.00	18.00 –20.00	18.00 –20.00
200 vis. No. 6 color	16.00 –17.00	16.00 –17.00	16.00 –17.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	20.00 –21.00	20.00 –21.00	20.00 –21.00
180 vis. No. 3¼ color	17.00	17.00	17.00
100 vis. No. 2¼ color	16.00	16.00	16.00
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	33.00 –34.00	33.00 –34.00	33.00 –34.00
500 vis. No. 6½ color	31.00	31.00	31.00
400 vis. No. 7¼ color	30.00	30.00	30.00
300 vis. No. 6 color	23.00 –25.00	23.00 –25.00	23.00 –25.00
200 vis. No. 6 color	20.00 –22.00	20.00 –22.00	20.00 –22.00
MEDICINAL OILS			
.875-880 s.g.	$0.76 – 0.91	$0.76 – 0.91	$0.76 – 0.91
.860-.865 s.g.	$0.58 – 0.73	$0.58 – 0.73	$0.58 – 0.73
WAXES (In cents per pound, f.a.s. carload lots)			
WHITE CRUDE SCALE (In barrels)			
122-124 A.m.p.	3.00	3.00	3.00
124-126 A.m.p.	3.00	3.00	3.00
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
125-127 A.m.p.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
128-130 A.m.p.	4.50	4.50	4.50
130-132 A.m.p.	5.25 – 5.50	5.25 – 5.50	5.25 – 5.50
133-135 A.m.p.	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
135-137 A.m.p.	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
YELLOW CRUDE SCALE			
124-126 A.m.p.	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. or more unless otherwise noted and for export shipment only).

GASOLINE	Sept. 9	Sept. 3	Aug. 26
U. S. Motor	8.50	8.50	8.50
60-62, 400 e.p.	9.50	9.50	9.50
61-63, 390 e.p.	9.75	9.75	9.75
64-66, 375 e.p.	10.00	10.00	10.00
U. S. Motor, cases (cargoes)	$1.85	$1.85	$1.85
64-66, cases (cargoes)	$2.00	$2.00	$2.00
KEROSENE			
44 water white	8.00	8.00	8.00
41-43 prime white	7.00	7.00	7.00
Water white, cases (cargoes)	$1.80	$1.80	$1.80
Prime white, cases (cargoes)	$1.70	$1.70	$1.70
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	4.00	4.00	4.00
*30 plus translucent gas oil	4.00 – 4.125	4.00 – 4.125	4.00 – 4.125
Grade C bunker oil	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
Grade C bunker oil, cargoes	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
*Less than ½ of 1% sulphur.			
MEXICAN CRUDE AND BUNKER OILS (F. O. B. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
Grade C bunker oil for bunkering purposes, taxes paid	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
SOUTH TEXAS LUBRICATING OILS, (Viscosity at 100°F.) (cold test 0) (Tanker, f. o. b. Houston)			
100 vis. No. 2 unfiltered pale	6.00 – 6.50	6.00 – 6.50	6.50
200 vis. No. 3 unfiltered pale	8.00 – 9.00	8.00 – 9.00	8.00 – 9.00
300 vis. No. 3 unfiltered pale	9.50 –10.00	9.50 –10.00	9.50 –10.00
500 vis. No. 3½ unfiltered pale	11.00 –11.50	11.00 –11.50	11.00 –11.50
750 vis No. 4 unfiltered pale	12.50 –13.00	12.50 –13.00	12.50 –13.00
1200 vis. No. 5 unfiltered pale	16.00 –16.50	16.00 –16.50	16.00 –16.50
200 vis. No. 5-6 red oil	7.75 – 8.00	7.75 – 8.00	7.75 – 8.00
300 vis. No. 5-6 Red oil	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
500 vis. No. 5-6 red oil	9.00 –10.00	9.00 –10.00	9.75 –10.00
750 vis. No. 5-6 red oil	11.75 –12.00	11.75 –12.00	11.75 –12.00
1200 vis. No. 5-6 red oil	16.00 –16.50	16.00 –16.50	16.00 –16.50

Gulf Domestic Market

(Prices are f.o.b. Gulf oil terminals in Texas and Louisiana in shipment of 20,000 bbls. or more, representing sellers' opinions, for domestic shipment only).

	Sept. 9	Sept. 3	Aug. 26
U. S. Motor gasoline	7.50	7.50	7.75
41-43 w.w. kerosene	6.50	6.50	6.50
*26-32 translucent gas oil	4.00	4.00	4.00
*Less than ½ of 1% sulphur.			

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Sept. 9	Sept. 3	Aug. 26
Gasoline, U. S. Motor, 53-55 Gravity	6.75 – 7.25	7.00 – 7.50	7.00 – 7.50
Gasoline, U. S. Motor-blends and special cuts	7.50 –10.00	7.50 –10.00	7.50 –10.00
Gas Oil, 30-34, per barrel	$0.925–$1.05	$0.95 –$1.05	$0.95 –$1.05
Diesel Oil, 27 plus, per barrel	$0.875–$1.00	$0.875–$1.00	$0.875–$1.00
Bunker oil, 14-18, per barrel	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
Fuel oil, 14-18 per barrel	$0.60 –$0.85	$0.60 –$0.85	$0.60 –$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Kerosene, 38-40 w.w., 125, 150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	Sept. 9 Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	35	37/6
Gulf to U. K. or Continental ports*	22–23	23
North Atlantic to U. K. or Continental ports*	19–20	21
Calif. to North Atlantic ports (not E. of N. Y.)	$0.90	$0.85–$0.90
Gulf to North Atlantic ports (not E. of N. Y.)**	30–35	37

*Continental ports in the range between Bordeaux and Hamburg, both inclusive.
**Venezuela loading same rate. For Tampico 3c to 5c per bbl. additional.

DILL

Standard Tire Valves and Valve Parts

DILL
TIRE VALVE EQUIPMENT
Air tight valves make Tires last longer
DILL STANDARD DUST CAP Nº 242
DILL INSTANTON
On or Off in a Wink!
DILL
DILL STANDARD DUST CAP Nº 240

Here's an Extra Profit *for Every Service Station . . .*

NO extra work—just put the Dill Super Server where it can be seen by everyone who comes into your station—call attention to its contents when you wait on your customers—and you'll be surprised at the results in dollars and cents.

A full assortment of Dill Valve Insides, Valve Caps, and Instant-Ons—just the things that people expect in a service station today—all packed in handy little boxes ready to lift off of the handsome lithographed display board.

Cut the coupon and mail it now. Get the complete Dill story on how to make an extra profit—also full information on the new line of Dill Super Service Air Chucks.

DILL MANUFACTURING COMPANY
Cleveland, Ohio

Manufactured in Canada by the Dill Manufacturing Co. of Canada, Ltd., Toronto, Ontario

One model of the complete Dill line of Super Service Air Chucks, which inflate fast with ANY type of valve or valve inside.

DILL MANUFACTURING COMPANY · *Cleveland, Ohio*
Tell me how to make an extra profit with the Dill Super Server—and give me complete information on your Super Service Air Chucks.
Name _____
Address _____

Tank Wagon Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t. w. and s. s. markets for a whole year, arranged for quick reference)

These Prices in Effect Sept. 9, 1929, as Posted by Principal Marketing Companies

S. O. NEW JERSEY TERRITORY

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W
Atlantic City, N. J.	12	2	14	18	13
Newark, N. J.	14	2	16	20	13
Annapolis, Md.	14	4	18	22	13
Baltimore, Md.	14	4	18	22	12
Cumberland, Md.	14	4	18	22	13
Washington, D. C.	14	2	16	20	12
Danville, Va.	14	5	19	23	12
Norfolk, Va.	14	5	19	23	13
Richmond, Va.	14	5	19	23	13
Roanoke, Va.	13	5	18	21	13
Petersburg, Va.	14	5	19	23	13
Charleston, W. Va.	14	4	18	22	13
Keyser, W. Va.	14	4	18	22	13
Parkersburg, W. Va.	14	4	18	22	13
Wheeling, W. Va.	14	4	18	22	13
Charlotte, N. C.	14	5	19	23	13
Hickory, N. C.	14	5	19	23	13
Mt. Airy, N. C.	14	5	19	23	13
Salisbury, N. C.	12	5	17	20	13
Charleston, S. C.	14	6	20	24	13
Columbia, S. C.	14	6	20	24	13

CONTINENTAL OIL

Denver, Colo.	14	4	18	21	15.5
Pueblo, Colo.	14	4	18	21	15.5
Grand Junc., Colo.	18.5	4	22.5	25.5	19
Casper, Who.	17	4	21	24	14
Cheyenne, Wyo.	18	4	22	25	15.5
Butte, Mont.	20.5	5	25.5	28.5	20
Helena, Mont.	20.5	5	25.5	28.5	20
Salt Lake City, Utah	18.5	3½	22	25	17
Boise, Ida.	20.5	4	24.5	27.5	19
Twin Falls, Ida.	20.5	4	24.5	28.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA

Phoenix, Ariz.	14	4	18	22	20.5
Los Angeles, Cal.	16.5	3	19.5	22.5	15.5
Fresno, Cal.	17	3	20	23	17
San Francisco, Cal.	17	3	20	23	15.5
Reno, Nev.	21	4	25	28	19
Portland, Ore.	17.5	3	20.5	23.5	16.5
Seattle, Wash.	17.5	3	20.5	23.5	16.5
Spokane, Wash.	21.5	3	24.5	27.5	20.5
Tacoma, Wash.	17.5	3	20.5	23.5	16.5

Note: 4c per gal. discount to dealers off t.w. price of gasoline to customers taking tank truck delivery, thru S. O. California territory, except 1c discount at Phoenix to dealers only.

S. O. LOUISIANA

Little Rock, Ark.	14	5	19	23	13
Alexandria, La.	‡14	4	‡18	‡22	†16
Baton Rouge, La.	12	4	16	20	†14.5
Lake Charles, La.	††14.5	4	††18.5	††22.5	†16
New Orleans, La.	*12.5	4	*16.5	20.5	†16
Shreveport, La.	13.5	4	17.5	21.5	†15
Lafayette, La.	**14	4	**18	**22	†14
Bristol, Tenn.	14	5	19	23	14
Chattanooga, Tenn.	11	5	16	20	14
Knoxville, Tenn.	13	5	18	22	16
Nashville, Tenn.	14	5	19	23	16
Memphis, Tenn.	13	5	18	22	12.5

*New Orleans gasoline prices include 1c parish tax in addition to 4c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

**Lafayette gasoline prices include 1c parish tax in addition to 4c state tax.

††Lake Charles gasoline prices include 1c parish tax.

‡Alexandria gasoline prices include 1c Rapides Parish tax.

S. O. KENTUCKY

Ashland, Ky.	13	5	18	19	15.5
Catlettsburg, Ky.	13	5	18	19	15.5
Lexington, Ky.	15	5	20	22	15.5
Louisville, Ky.	16	5	21	23	15
Covington, Ky.	16	5	21	22	15.5
Clarksdale, Miss.	15	5	20	22	12.5
Gulfport, Miss.††	17.5	5	22.5	24.5	14
Jackson, Miss.	16	5	21	23	13
Natchez, Miss.	15.5	5	20.5	22.5	14
Vicksburg, Miss.	15.5	5	20.5	22.5	14
Birmingham, Ala.	16	4	20	22	15
Mobile, Ala.‡	16	4	20	22	15
Montgomery, Ala.*	17	4	21	23	16.5
Atlanta, Ga.	16	4	20	22	†16.5
Augusta, Ga.	14	4	18	20	†15.5
Macon, Ga.	17	4	21	23	†16.5
Savannah, Ga.	16	4	20	22	†15.5
Jacksonville, Fla.	16	6	22	24	14.5
Miami, Fla.	17	6	23	25	15.5
Tampa, Fla.	16	6	22	24	14.5
Pensacola, Fla.**	17	6	23	25	14.5

Note: Net price to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. ‡Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

Latest Changes in Tank Wagon Prices

Gasoline

Atlantic Refining—T.w. and s.s. both cut 1c through Pennsylvania and Delaware, except Erie, Sept. 9.

S. O. Ohio—T.w. up 1c to 19c and s.s. up 2c to 20c, Wapakoneta, assuming the state-wide structure, Sept. 1.

Magnolia Petroleum—T.w. and s.s. both cut 3c, Texarkana, to 14c and 16c respectively, including 4c tax, Sept. 5.

S.s. only cut 2c, Houston, to 19c, Sept. 9.

Kerosene

S. O. Louisiana—Kerosene cut 2c, Chattanooga, to 14c, Aug. 31.

S. O. NEBRASKA

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Omaha, Neb.	16.25	4	20.25	22.25	13.25
McCook	17.75	4	21.75	23.75	14.75
Norfolk	16.75	4	20.75	22.75	13.75
North Platte	17.75	4	21.75	23.75	14.50
Scottsbluff	17.75	4	21.75	23.75	14.25

S. O. INDIANA

Chicago, Ill.	16	3	19	29	13
Decatur, Ill.	16.2	3	19.2	20.2	13.1
E. St. Louis, Ill.	15.4	3	18.4	17.4	12.2
Joliet, Ill.	16.4	3	19.4	20.4	13.3
Peoria, Ill.	16.2	3	19.2	20.2	13.1
Quincy, Ill.	16.2	3	19.2	20.2	12.9
Indianapolis, Ind.	16.2	4	20.2	21.2	14.2
Evansville, Ind.	16	4	20	21	14
South Bend, Ind.	16.4	4	20.4	21.4	14.4
Detroit, Mich.	16.8	3	19.8	20.8	14.7
Grand Rapids, Mich.	16.7	3	19.7	20.7	14.6
Saginaw, Mich.	16.9	3	19.9	20.9	14.8
Green Bay, Wisc.	16.6	2	18.6	19.6	13.4
Madison, Wisc.	16.3	2	18.3	17.3	13.1
Milwaukee, Wisc.	16.1	2	18.1	19.1	12.9
La Cross, Wisc.	17.2	2	19.2	20.2	14
Minneapolis, Minn.	17.2	3	20.2	21.2	13.9
Duluth, Minn.	17.5	3	20.5	21.5	13.9
Mankato, Minn.	17.1	3	20.1	21.1	13.7
Des Moines, Ia.	16.5	3	19.5	20.5	13.3
Davenport, Ia.	16.5	3	19.5	20.5	13.3
Sioux City, Ia.	16.1	3	19.1	20.1	12.9
Mason City, Ia.	16.5	3	19.5	20.5	13.3
St. Louis, Mo.	*15.9	2	17.9	18.9	12.3
Kansas City, Mo.	†16.9	2	18.9	19.9	11.6
St. Joseph, Mo.	†16.5	2	18.5	19.5	12.2
Fargo, N. D.	18.9	3	21.9	22.9	15.9
Grand Forks, N. D.	19.2	3	22.2	23.2	16.2
Minot, N. D.	18.9	3	21.9	22.9	15.9
Pierre, S. D.	17	4	21	22	14.4
Huron, S. D.	17.3	4	21.3	22.3	14.7
Wichita, Kans.	14.8	3	17.8	18.8	11.8
Bartlesville, Okla.	14.5	4	18.5	19.5	11.5

S. O. Indiana's quantity contract price schedule thru territory except Chicago on tank truck deliveries of gasoline, figured from the service station price, is 2c for 500 gals. or more a month; 2½c for 2000 gals. or more a month and 3c for 6000 gals. or more a month.

In Chicago and vicinity, these discounts apply. Over 500 gals. per month, 2c per gal. off service station price; over 1,000 gals. per month, 4c per gal. off service station price.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

	Gasoline		Total		Oil
	T.W.	Tax	T.W.	S.S.	T.W.
Ohio state-wide.	15	4	19	20	13
Belmont, Columbiana, Jackson, Lorain, Mahoning, Meigs, Noble, Washington, Montgomery and Jefferson Counties, and					
*11 Competitive Pts.	14	4	18	18	13
At †6 Competitive Points	14	4	18	19	13
Bryan and Findlay.	13	4	17	17	13

Note:—Discount to dealers and commercial accounts generally thru Ohio is 2c per gal. off t.w. price. Exceptions: 3c off in the 10 counties and 11 competitive points quoted on second line above and at Findlay, except that commercial accounts in Belmont, Columbiana, Jackson, Mahoning, Montgomery and Jefferson counties get 1c off, dealers get 3c.

†These 6 points are: Hicksville, Celina, Arlington, Mortimer, Mendon, and Nevada.

*These 11 points are: Arcadia, Perrysburg, Fostoria, Urbana, Jamestown, Marion, St. Paris, Ada, Lima, Hamilton, and Piqua.

MAGNOLIA PETROLEUM

Muskogee, Okla.	13	4	17	20	13
Oklahoma City	13	4	17	20	10
Tulsa, Okla.	11	4	15	19	10
Fort Smith, Ark.†	11	†4	15	17	12
Little Rock, Ark.	14	5	19	23	13
Texarkana, Ark.*	10	*4	14	16	12
Dallas, Tex.	13	4	17	21	13
Fort Worth, Tex.	13	4	17	20	12
Houston, Tex.	13	4	17	19	11
San Antonio, Tex.	13	4	17	21	11
El Paso, Tex.	12	4	16	19	16

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 4c applies. In this district outside of the city, the 5c Arkansas tax applies.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City.	14	2	16	*19	15
Albany, N. Y.	16	2	18	20	15
Buffalo, N. Y.	16	2	18	20	14
Rochester, N. Y.	16	2	18	20	13
Syracuse, N. Y.	16	2	18	20	12
Boston, Mass.	16	2	18	20	15
Augusta, Me.	16	4	20	21	15
Manchester, N. H.	16	4	20	22	15
Burlington, Vt.	16	4	20	22	13

Note:—S. O. New York allows concessions of 1 to 2c per gal. to dealers under posted tank wagon prices.

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator in New York selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	22	13
Philadelphia, Pa.	16	*	16	22	13
Allentown, Pa.	16	*	16	22	13
Erie, Pa.	13	*	13	17	13
Scranton, Pa.	16	*	16	22	13
Altoona, Pa.	16	*	16	22	13
Williamsport, Pa.	15	*	15	19	13
Dover, Del.	16	3	19	21	13
Wilmington, Del.	16	3	19	21	13
Boston, Mass.	16	2	18	20	15
Springfield, Mass.	16	2	18	20	15
Worcester, Mass.	16	2	18	20	15
Fall River, Mass.	16	2	18	20	13
Providence, R. I.	16	2	18	20	13
Hartford, Conn.	16	2	18	20	14
New Haven, Conn.	16	2	18	20	15
Atlantic City, N. J.	14	2	16	18	13
Camden, N. J.	16	2	18	20	13
Trenton, N. J.	16	2	18	20	13

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Florida, 1/8c on both; Georgia, 1/10c on both; Indiana, 4/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both; Missouri, 3/10c to 1/2c on both; Nebraska, 3/50c to 1/2c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosene; Wisconsin, 3/50c on both.

Kerosene inspection fees only, per gallon; Iowa, 7/100c; Michigan 1/5c to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above state or other states there are local inspection fees.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect Sept. 9, 1929

ATLANTIC REFINING

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Annapolis, Md.	16	4	20	22	13
Baltimore, Md.	16	4	20	22	12
Hagerstown, Md.	12	4	16	18	13
Richmond, Va.	16	5	21	23	13
Wilmington, N. C.	16	5	21	23	13
Brunswick, Ga.	16	6	22	24	**15.5
Jacksonville, Fla.	16	6	22	24	14.5

Note: 2c per gal. discount off t.w. price to dealers thru territory; also 2c off to commercial accounts under contract for one year.

*4-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosene prices include 1c state tax.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&P.* Naphtha	Cleaner Naphtha
Chicago	15.7	17.2	19
Detroit	17.4	18.9	20.7
Kansas City	†15.9	†17.4	†19.2
Milwaukee	16.4	*19.9	*21.7
Minneapolis	*19.7	*21.2	*23
St. Louis	15.6	17.1	18.9
New York		17	23
Boston		19	23

*Includes 2c state tax. †Includes 1c city tax.

Petroleum Spirits

Tank Cars (Solvent)	
New York refineries	12.00
Philadelphia refineries	11.50–12.00
Tank Wagon or Steel Barrels	
New York City	17-18
New England	19
New Jersey	16-19
Pennsylvania	18

Note: 2c off above t.w. prices to large buyers in some instances.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
ONTARIO					
Toronto	20.5	5	25.5	29	21
Ottawa	14.5	5	19.5	23	21
Cochrane	25.5	5	30.5	..	26
Ft. William	23.5	5	28.5	32	23.5
MANITOBA					
Winnipeg	22.5	3	25.5	29	22.5
SASKATCHEWAN					
Regina	27	3	30	34	27
ALBERTA					
Edmonton	28.5	5	33.5	37	28.5
Calgary	24.5	5	29.5	33	24.5
BRITISH COLUMBIA					
Vancouver	23	3	26	30	24
QUEBEC					
Montreal	21.5	5	26.5	30	22
Quebec City	22.5	5	27.5	31	23
Three Rivers	22.5	5	27.5	31	23
NEW BRUNSWICK					
St. John	25	5	30	34	25
Moncton	25	5	30	34	25
NOVA SCOTIA					
Halifax	25	5	30	34	25
Sydney	25	5	30	34	25
PRINCE EDWARD ISLAND					
Charlottetown	25	5	30	34	25

Note: In districts surrounding these points 1c additional is added to city price.

Steel Buildings for Every Purpose

Warehouses - Pumphouses - Sub-Stations - Meterhouses - Engine Houses - Garages Gasoline and Oil Filling Stations, Etc.

We manufacture the simplest to the most elaborate filling stations. If you have in mind any additions or improvements, let us furnish you plans and prices.

The Edwards Manufacturing Co.

524-544 Eggleston Ave. Cincinnati, Ohio

"What About The OILGRAM?"

—asked the executive of a gasoline company on the west coast recently of a Tulsa oil man. His answer was . . .

"If you were to wire me for Mid-Continent gasoline prices today, I would phone a member of the OILGRAM staff, and my reply to you would be the *gist of what he told me.* The OILGRAM staff is in direct and close contact with the markets almost every hour of the business day. *They know their business.*"

You too, can have the benefit of this close contact with all phases of the market at all the principal refining and marketing centers.

The service costs only $25 a quarter, or $75 a year, payable in advance. Approximately 30 cents a day—less than the cost of one wire or one phone call.

Avail yourself of this fast, daily market service today—send your order with check to the nearest mailing point.

TULSA—904 World Bldg.

CHICAGO—35 East Wacker Drive

NEW YORK—342 Madison Avenue

CLEVELAND—1213 West Third St.

Built for *mileage* from Rim to Road

THIS cross-section of a Fisk Transportation Cord shows the many unique features that give unusual durability.

The tough tread, made of special heat-resisting material, is designed to give maximum traction without "cupping".

Breaker strips absorb and distribute all road shocks.

Between these strips and the carcass are extra cushion strips to give additional protection.

The carcass itself, made by Fisk's unique *All-Cord* process, is free from internal friction and over-heating. Sinewy cords are insulated by live rubber, preventing wear when the carcass flexes.

The multiple cable bead provides a solid foundation at the point of greatest stress, giving the strength to withstand every strain.

The correctness of Fisk's unique construction has been proved under all kinds of conditions on roads from coast to coast. Equip your truck with Fisk Transportation Cords if you want tires you can always depend on...regardless of loads or roads.

FISK

Crude Oil Prices (in Effect Sept. 9, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Allegheny, N. Y. District)	*$3.30
Bradford District Oil in National Transit Lines (Bradford District)	*3.30
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	*3.30
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	3.25
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	3.15
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.95
Corning Grade in Buckeye Pipe Lines (Ohio)	1.90
Corning, O., heavy grade	1.80
Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.80
Ragland Grade in Cumberland Pipe Lines (Kentucky)	$0.60

***Oil run prior to July 1, 1929 is $3.25 per bbl.**

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.80

MICHIGAN

(Posted by Dixie Oil Co.)

Dundee (Muskegon)	$1.25

Traverse (Muskegon):

32-32.9	$1.25	37-37.9	$1.50
33-33.9	1.30	38-38.9	1.55
34-34.9	1.35	39-39.9	1.60
35-35.9	1.40	40-40.9	1.65
36-36.9	1.45	41-41.9	1.70

(Posted by Pure Oil Co.)

Midland, Midland County	$1.70

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Effective May 21, 1929

Wooster	$1.90	Princeton	$1.75
Lima	1.80	Illinois	1.75
Waterloo	1.20	Plymouth	1.28
Indiana	1.57	West Kentucky	1.83

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia	$2.20
Oil Springs	2.27

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective May 20, 1929

Below 25	$0.85	35-35.9	$1.40
25-25.9	0.90	36-36.9	1.45
26-26.9	0.95	37-37.9	1.50
27-27.9	1.00	38-38.9	1.55
28-28.9	1.05	39-39.9	1.60
29-29.9	1.10	40-40.9	1.65
30-30.9	1.15	41-41.9	1.70
31-31.9	1.20	42-42.9	1.75
32-32.9	1.25	43-43.9	1.80
33-33.9	1.30	44 and above	1.85
34-34.9	1.35		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

May 20, 1929, same schedule as Prairie in above fields.

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

May 20, 1929, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades:

Below 26	$0.70	29-29.9	$0.95
26-26.9	0.75	30-30.9	1.05
27-27.9	0.85	31-31.9	1.15
28-28.9	0.90		

May 20, 1929, Glasscock, Crane, Upton, Winkler, Howard and Mitchell Counties same prices as Humble's postings in West Texas which see.

Iatan district	$0.93
Corsicana heavy	0.80
Luling	0.90
Mirando	0.90

Carter Oil Co.

(Oklahoma and Kansas)

May 20, 1929, same schedule as Prairie except Carter does not post oil below 25.

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective May 20, 1929

Hutchinson and Carson Counties:

Below 32	$0.90	38-38.9	$1.25
32-32.9	0.95	39-39.9	1.30
33-33.9	1.00	40-40.9	1.35
34-34.9	1.05	41-41.9	1.40
35-35.9	1.10	42-42.9	1.45
36-36.9	1.15	43-43.9	1.50
37-37.9	1.20	44 and above	1.55

Wheeler County:

Below 30	$0.90	37-37.9	$1.30
30-30.9	0.95	38-38.9	1.35
31-31.9	1.00	39-39.9	1.40
32-32.9	1.05	40-40.9	1.45
33-33.9	1.10	41-41.9	1.50
34-34.9	1.15	42-42.9	1.55
35-35.9	1.20	43-43.9	1.60
36-36.9	1.25	44 and above	1.65

Gray County:

Below 29	$0.90	37-37.9	$1.35
29-29.9	0.95	38-38.9	1.40
30-30.9	1.00	39-39.9	1.45
31-31.9	1.05	40-40.9	1.50
32-32.9	1.10	41-41.9	1.55
33-33.9	1.15	42-42.9	1.60
34-34.9	1.20	43-43.9	1.65
35-35.9	1.25	44 and above	1.70
36-36.9	1.30		

Above prices met by The Texas Co. and Magnolia on May 20.

WEST TEXAS

Humble Oil & Refining Co.

Effective May 20, 1929

Winkler, Crane, Upton, Crockett, Howard and Pecos Counties, also Lea County, N. Mex.

Below 25	$0.70	25-25.9	$0.74
26-26.9	0.78	32-32.9	$1.02
27-27.9	0.82	33-33.9	1.06
28-28.9	0.86	34-34.9	1.10
29-29.9	0.90	35-35.9	1.14
30-30.9	0.94	36 and above	1.18
31-31.9	0.98		

May 20, 1929, The Texas Co. posted same prices as Humble in Crane, Upton, Pecos and Winkler., and Magnolia in Crane, Upton, Winkler, Glasscock, Howard and Mitchell

SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

Effective May 20, 1929

Mirando	$0.90
Salt Flat	1.25

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto and **Cotton Valley.

Effective May 22, 1929

Below 28	$1.00	36-36.9	$1.45
28-28.9	1.05	37-37.9	1.50
29-29.9	1.10	38-38.9	1.55
30-30.9	1.15	39-39.9	1.60
31-31.9	1.20	40-40.9	1.65
32-32.9	1.25	41-41.9	1.70
33-33.9	1.30	42-42.9	1.75
34-34.9	1.35	43-43.9	1.80
35-35.9	1.40	44 and above	1.85

**Cotton Valley, below 36, $0.85. Beginning with 36-36.9, same schedule as above.

Smackover, below 24			$0.85
do	24 and above		1.00
Bellevue			1.30
*Urania, La.			1.10
†East El Dorado			0.75

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

May 20, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.85; 25-25.9, $0.90; 26-26.9, $0.95; 27-27.9, $1.00.

May 22, Magnolia, Atlantic, Shreveport-Eldorado Pipe Line, Louisiana Oil, and Gulf Companies met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective May 22, 1929

Below 28	$0.90	30-30.9	$1.02
28-28.9	0.94	31-31.9	1.06
29-29.9	0.98	32 and above	1.10

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective May 20, 1929

Grades A	$1.30	29-29.9	$1.30
Grades B:		30-30.9	1.33
Below 25	$1.15	31-31.9	1.36
25-25.9	1.18	32-32.9	1.39
26-26.9	1.21	33-33.9	1.42
27-27.9	1.24	34-34.9	1.45
28-28.9	1.27	35 and above	1.48

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Super-Station Problem On Jobber Program

CLEVELAND, Sept. 7.—The super service station will come in for study at the annual meeting of the Big Four State Jobbers Convention at Kansas City Oct. 15 to 17. The program will embrace a discussion of the super-station versus the usual type of service station.

Shall the gasoline dealer sell the tires or the tire dealer sell the gasoline? is another live subject which will be treated.

Other program features will be discussions on the code of marketing practices, how the Independent dealer can profit from aviation and specifications for aviation oil and gasoline.

Plans for the program were worked out Aug. 31 at a meeting of secretaries of the jobber associations of Kansas, Missouri, Nebraska and Iowa, the four states which hold the annual convention.

Entertainment will be in the hands of the Kansas City Oil Men's Club.

Gas Tax Collections Up

RICHMOND, Va., Sept. 7.—Gasoline tax collections in North Carolina for August totaled $1,080,936.47, as compared with $873,363.70 for August, 1928, or a gain of $207,172.77 over last August, the State department of revenue has announced.

Gasoline tax collections for the first two months of the current fiscal year are $465,413.85 ahead of what they were for the same two months of the last fiscal year. The increase, however, is in some measure due to the increase in the tax of 1 cent per gallon, effective April 1 of this year.

Plans to Have Tourists Register at Stations

CHICAGO, Sept. 5.—A plan to cash in on tourist patronage at service stations is being worked out by Conklin & Sons, Madison, Wis., jobbers. The plan is to have each tourist customer register, and follow up with letters inviting them to return.

A register would be placed in rest rooms and a sign would ask the customers to sign the book. When sufficient time has lapsed it is planned to write to the customer at his home thanking him for his patronage.

The plan may be extended to include another letter the following spring inviting the customer to return to Wisconsin, and especially Madison, for a vacation or a trip.

"Imperial has taught me to expect too much of other gasolines"

Imperial

QUALITY PRODUCTS

GASOLINES
U. S. Motor
High Test
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FUEL OILS
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"I always drive up to the Imperial pump . . . it stands for more miles and more smiles."

All Imperial Gasolines are of super performance quality with controlled volatility for Summer and Winter service.

HUNDRED PERCENT *the premium automotive fuel for high compression engines.*

IDEAL FLIGHT *the premium aviation fuel for airplanes.*

These grades are especially refined to super performance specifications.

Imperial Refineries

Imperial Refining Co. **San Angelo Refining Co.**
Kettle Creek Refining Co. **Wickett Refining Co.**

General Offices
TULSA, OKLAHOMA

Crude Oil Prices (in Effect Sept. 9, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective May 20, 1929

Grades A	$1.30	*Grades B	$1.15
‡Grades B (light crude):			
35-35.9	$1.49	40-40.9	$1.69
36-36.9	1.53	41-41.9	1.73
37-37.9	1.57	42-42.9	1.77
38-38.9	1.61	43-43.9	1.81
39-39.9	1.65	44 and above	1.85

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on all below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective May 20, 1929)

‡Salt Creek	29-29.9	$1.10
" "	30-30.9	1.15
" "	31-31.9	1.20
" "	32-32.9	1.25
" "	33-33.9	1.30
" "	34-34.9	1.35
" "	35-35.9	1.40
" "	36-36.9	1.45
" "	37 and above	1.50
Elk Basin		1.65
Grass Creek light		1.65
Big Muddy		$1.43
Lance Creek		1.68
Rock Creek		1.40
Mule Creek		1.20
Rex Lake		1.10
‡Osage		1.65
‡Cat Creek, Mont.		1.65
Sunburst, Mont.		1.75
‡Hogback, N. Mex.		1.70
Artesia, N. Mex.		1.08

‡Posted by Midwest Refining Co. Midwest al so buys Grass Creek light and Elk Basin.

CALIFORNIA

***Standard Oil Co. of California**

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach	Inglewood Torrance	Ollnda-Brea Canon Richfield	Athens-Rosecrans Dominigues	Elwood Terrace	Whittier La Habra	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Montebello	Kettleman Hills	*Santa Maria (Orcutt)	*Ventura
14-14.9	$ .70	$ .70	$ .70	....	....	$ .70	$ .70	....	$ .50	$ .50	$ .50	$ .50	$ .50	$ .70	....	$ .65	$ .70
15-15.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
16-16.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
17-17.9	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
18-18.9	.75	.75	.75	....	....	.75	.75	....	.50	.56	.56	.56	.56	.70	....	.70	.75
19-19.9	.80	.80	.80	....	....	.80	.80	....	.50	.62	.62	.62	.62	.75	$1.65	.70	.80
20-20.9	.85	.85	.85	....	....	.84	.84	....	....	.68	.68	.68	.68	.80	for	.70	.85
21-21.9	.89	.89	.89	....	....	.88	.88	.89	....	.74	.74	.74	.74	.85	55°	.86	.86
22-22.9	.93	.93	.93	....	....	.91	.91	.92	....	.80	.80	.80	.80	.90	gravity	.87	.87
23-23.9	.97	.97	.97	....	....	....	.94	.95	....	.85	.85	.85	.85	.95	and	.90	.90
24-24.9	1.01	1.01	1.01	1.01	....	....	.97	.98	....	.90	.90	.88	.88	.98	over	.94	.94
25-25.9	1.05	1.05	1.05	1.05	....	....	1.00	1.01	....	.95	.95	.91	.91	1.01	....	.98	.98
26-26.9	1.09	1.09	1.09	1.09	....	....	1.04	1.04	....	1.00	1.00	.94	.94	1.04	....	1.02	1.02
27-27.9	1.13	1.13	1.13	1.13	....	....	1.08	1.07	....	1.05	1.05	.98	.97	1.07	....	....	1.06
28-28.9	1.17	1.17	1.17	1.17	....	....	1.12	1.10	....	1.10	1.10	1.02	....	1.10	....	....	1.10
29-29.9	1.21	....	1.21	1.21	....	....	1.16	1.15	....	1.16	1.16	1.06	....	1.13	....	....	1.14
30-30.9	1.25	....	1.25	1.25	....	....	1.20	1.20	....	1.22	1.22	1.10	....	1.16	....	....	1.18
31-31.9	1.30	....	....	1.30	....	....	....	1.25	....	1.28	1.28	1.14	....	....	....	....	1.23
32-32.9	1.35	....	....	1.35	....	....	....	1.30	....	1.34	1.34	1.18	....	....	....	....	1.28
33-33.9	....	....	....	1.41	....	....	....	1.35	....	1.40	1.40	1.22	....	....	....	....	1.34
34-34.9	....	....	....	1.47	$1.16	....	....	1.40	....	....	1.46	1.26	....	....	....	....	....
35-35.9	....	....	....	1.53	1.22	....	....	1.45	....	....	....	1.30	....	....	....	....	....
36-36.9	....	....	....	1.59	1.28	....	....	1.50	....	....	....	....	....	....	....	....	....
37-37.9	....	....	....	1.65	1.34	....	....	1.55	....	....	....	....	....	....	....	....	....
38-38.9	....	....	....	1.71	1.40	....	....	1.60	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	1.77	1.46	....	....	1.65	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	1.83	1.52	....	....	....	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	1.89	1.58	....	....	....	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	1.95	1.64	....	....	....	....	....	....	....	....	....	....	....	....

*Santa Maria and Ventura postings are by Union Oil Co. Union Oil Co. posts same prices in all above fields as Standard except it does not post prices in Wheeler Ridge, Whittier, La Habra, Newhall and Kettleman Hills. Standard does not contract for crude testing 11-13.9 gravity, but pays 45c a barrel when purchased.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	Sept. 9	Sept. 3
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums cwt.	$0.80	$0.80
Sal Soda wks.	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.	$18.50	$18.50
Sulfur, flowers of, cwt.	$3.10-4.00	$3.50-4.50
Liquid Chlorine, tank cars, wks, lb.	3.50–5.00	3.50–5.00

Compounders' Supplies

	Sept. 9	Sept. 3
Vegetable Oils		
Linseed carloads, spot, lb.	13.60	12.80
Tanks, spot	12.80	12.00
Soya Bean, Tanks, coast, lb.	9.50	9.50
Oleic Acid		
Distilled, tanks, lb.	9.75	9.75
Distilled, bbls, lb.	10.875	10.875
Saponified, tanks, lb.	9.75	9.75
Saponified, bbls, lb.	10.625	10.625
Lard Oils		
Prime Winter Strained, lb.	15.25	15.25
Extra Winter Strained, lb.	12.75	12.75
Extra, lb.	12.50	12.50
Extra No. 1, lb.	12.00	12.00
No. 1, lb.	11.75	11.75
No. 2, lb.	11.50	11.50
Tallow oil, lb.	11.00	11.00
Neatsfoot Oil		
Pure, bbls, lb.	14.50	14.50
Extra, bbls, lb.	12.25	12.25
No. 1 bbls, lb.	12.00	12.00
Cold Pressed, lb.	12.50	18.50
Fish Oils		
Menhaden Oil		
Light Pressed, gal.	70	70
Light Pressed, tank cars, N.Y. gal.	58–60	58–60
White bleached, gal.	77	77
Yellow bleached, gal.	75	75
Whale, extra winter bleached, gal.	82	82
Naval Stores		
Steam distilled turpentine, N. Y., gal.	51	51
Steam distilled turpentine, Savannah, gal.	45	45
Gum turpentine, N. Y., gal.	50	50
Gum turpentine, f.o.b. cars Savannah, gal.	48	48
Wood Rosin F, N. Y., bbl.	$7.55	$7.55
Wood Rosin F, Savn'h, bbl.	$6.50	$6.50
Gum Rosin B. N. Y., bbl.	$8.65	$8.65
Gum Rosin B. f.o.b. cars Savannah, bbl.	$7.75	$7.75
Rosin oil, pure, gal.	61	61
Rosin oil, compounded, gal.	50	50
Pine Tar		
Kiln burnt, bbl.	$13.00–14.00	$13.00–14.00
Retort, bbl.	$13.50–14.50	$13.50–14.50
Alcohol		
Denatured Formula 5, in bbls., per gal.	59–66	58–65

Auto Output Slackens in July But Exceeds That of 1928

CLEVELAND, Sept. 6

ALTHOUGH production of motor vehicles in the United States in July was less than in June, the July production was more than 25 per cent larger than production a year before, according to the automobile production statistics of the Department of Commerce. The July output totaled 500,331 vehicles as compared with 545,375 in June and 392,086 in July, 1928.

In Canada output in July was 17,461 vehicles as compared with 21,492 in June and 25,226 in July, 1928.

Comparative figures of production by factories in the United States follows:

	Total	Passenger cars	Trucks	Taxicabs†
1928				
January	231,728	205,142	26,082	504
February	323,796	290,689	32,645	462
March	413,314	371,150	41,493	671
April	410,104	364,265	45,227	612
May	425,783	375,356	49,920	507
June	396,796	356,214	40,174	408
July	392,086	338,383	53,294	409
Total (7 months)	2,593,607	2,301,199	288,835	3,573
August	461,298	400,124	60,705	469
September	415,314	358,615	56,423	276
October	397,284	339,487	57,138	659
November	257,140	216,754	39,686	700
December	234,116	204,957	28,123	1,036
Total (year)	4,358,759	3,821,136	530,910	6,713
1929				
January	401,036	347,382	51,590	2,064
February	466,352	405,708	58,536	2,108
March	*585,222	*513,344	*69,799	2,079
April	621,336	537,225	82,425	1,686
May	*604,071	516,055	*86,698	1,318
June	*545,375	*452,624	*91,373	*1,378
July	500,331	426,159	73,118	1,054
Total (seven months)	3,723,723	3,198,497	513,539	11,687

*Revised.
†Includes only factory-built taxicabs, and not private passenger cars converted into vehicles for hire.

Peden and E. L. Wilson Firms Are Merged

HOUSTON, Sept. 6.—Announcement is made of the dissolution of the E. L. Wilson Hardware Co., of Beaumont, dealers in oil well supplies, and purchase of its assets with the exception of real estate and buildings by the Peden Iron & Steel Co., Houston. All former stockholders of the E. L. Wilson company have become stockholders in the Peden company. The combination of the two organizations, it is announced, gives the Peden Iron & Steel Co. assets of more than $6,000,000.

Officers of the Peden company are E. A. Peden, president; D. D. Peden, vice-president and treasurer; John A. Harvin, vice-president; B. E. Taylor, vice-president; John W. Watts, vice-president; H. M. Stone, vice-president; E. D. Peden, secretary and assistant to president; B. F. Watts, Jr., general manager. E. G. Edson, formerly president and general manager of the E. L. Wilson company, and Virgil Keith, formerly its vice-president, will be elected to the directorate of the Peden Iron & Steel Co.

J. F. Dale

The London representative of James B. Berry Sons' Co., Oil City, Pa., who recently visited the Berry headquarters at Oil City. Mr. Dale covers the United Kingdom and Ireland for the Berry company

Waste Motor Oil Used In Mosquito Fight

CONWAY, Ark., Sept. 5.—Dan Harton Jr., owner of the Harton service station at Conway, uses his crank case drainings to aid the town in its annual campaign against mosquitoes.

Mr. Harton's station is just across the street from a storm sewer which empties into a large drainage ditch which flows through the town. The ditch is not covered and has been a breeding place for mosquitoes.

Attendants at the station now empty the drainings directly into the sewer at the curb, and the oil spreading on the water in the ditch prevents mosquitoes from developing. City officials now are considering the laying of a special sewer from Mr. Harton's station to another drainage ditch so a portion of the drainings can be emptied there.

Conway has a city ordinance which makes a property owner liable to a fine when a breeding place for mosquitoes is found on the property. In past years a reward of $1 also has been paid to a person finding a mosquito. The campaign against the summer pests has been waged so successfully that they now are virtually unknown in the town.

Jan Faber

Managing director of James B. Berry Sons' Co., M. b.h., Hamburg, Germany, the continental European representative of James B. Berry Sons' Co., Inc., of Oil City, Pa., who recently visited the home office in Oil City

Your Monogram Franchise Has a High Sales Value

As a Monogram distributor, you control an exclusive territory. In the new franchise, you have the basis of a permanently profitable business.

In our national advertising we tell car owners to "Choose the Man Who Knows His Oil." We emphasize that only the independent can pick his oil on merit alone!

For thirty-six years Monogram has filled the requirements of the experts. Motor car, speed boat and airplane builders indorse it. Service men swear by it. The discriminating car owner demands Monogram when he wants real performance. And the distributor who handles Monogram never faces the competition of company-owned stations. These facts stand behind the Monogram franchise. These are the reasons why Monogram sells.

Let us send you full particulars about our exclusive territory franchise. We want you to know its unusual sales value. Write or wire to us today.

NEW YORK LUBRICATING OIL COMPANY

Makers of Monogram — Estab. 1893

General Offices:

116 Broad Street, New York City

Choose the Man Who Knows his Oil

THE Monogram distributor is not controlled by any oil manufacturer. He is free to select his oil on quality alone. He places the best interests of his customers ahead of everything else, and he prefers to handle an oil that meets the present-day requirements of heat and high speed.

This independent service man knows that the Monogram Oil of today is the product of thirty-six years' experience in making an oil that stands up under the most extreme operating conditions. This fact has been amply proved again and again in the gruelling tests of automobiles, speed boats and airplanes.

Monogram Oil is made from the best of premium crude. It is refined to insure the highest lubricating quality without any lowering of standards for quantity production. Follow the judgment of authorities who know the difference between an ordinary oil and the extra-lubrication values of Monogram. Then you can see for yourself the importance of this difference.

NEW YORK LUBRICATING OIL COMPANY

Makers of Monogram—Estab. 1893

General Offices: 116 Broad Street, New York City

Jobbers and distributors in open territories are invited to communicate with us.

Stands Up!

Monogram advertisement which appeared in Collier's August 31. Read every word of it—and notice how the Monogram campaign is building good will and sales for Monogram distributors.

MONOGRAM *Stands Up!*

Transactions in Oil Shares on New York Stock Exchange

1928 High	1928 Low	1929 High	1929 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Sept. 7 Sales	First	High	Low	Last	Change
43⅞	27⅛	42⅝	22½	(sh) 922,075	N.P.	Amerada Corp.	50cQ	July 31, 29	6,400	27	29⅛	27	27½	+ ½
85	51¼	64¾	31	(sh) 209,180	N.P.	American Republics Corp.	....	.....	1,800	38½	38½	34¾	38	— 1⅛
53⅜	37½	47¼	40	$56,000,000	$25	Associated Oil.	50cQ	June 30, 29	110	45⅛	45¼	45⅛	45⅛	0
62½	50	77⅞	53½	50,000,000	25	Atlantic Refining.	‡25cQ	June 15, 29	56,000	66⅛	66⅞	63¼	64¾	— 2½
53	20	49⅛	33⅛	47,261,125	25	Barnsdall Corp. A.	‡50cQ	Aug. 6, 29	19,000	38⅛	39⅞	36⅛	38	— ⅝
51⅛	20	49	38⅛	300,525	25	do B.	‡50cQ	Aug. 6, 29	.....	.....	.....	.....	.....	.....
24½	12¼	32	20	(sh) 956,075	N.P.	Beacon Oil.	....	.....	5,100	28	29½	27½	29	+ ½
36	25¼	30	25	$51,524,150	$25	California Petroleum.	....	Jan. 1, 29	.....	.....	.....	.....	.....	.....
.....	....	37¾	29½	(sh) 4,634,163	N.P.	Continental Oil (Delaware).	....	.....	36,200	34½	34½	32	34	+ ½
94⅞	68	94¾	63	21,031,400	100	General Asphalt.	.....	.....	10,500	88¾	88¾	84	85¼	— 2¾
141	110⅜	141	104½	6,628,200	100	do pfd.	$1.25Q	Sept. 3, 29	.....	.....	.....	.....	.....	.....
167	79	107	68¾	25,000,000	100	Houston Oil.	....	.....	3,600	77½	78	74	74½	— 3
38⅜	21¾	39¼	29⅛	(sh) 1,333,157	N.P.	Independent Oil & Gas.	50cQ	July 31, 29	27,700	32⅝	33	30	31⅜	— 1¼
39⅝	9	53⅛	29	$4,299,190	$10	Indian Refining.	....	Dec. 15, 20	42,400	49¾	49¾	45¼	47⅞	— 1½
37¼	8½	50¾	28	4,550,110	10	do ctfs.	.....	.....	12,600	46⅝	46⅞	43⅜	46	— ⅞
185	140	165	160	1,977,700	100	do pfd. new.	$1.75Q	July 1, 29	.....	.....	.....	.....	.....	.....
39⅛	27⅜	38⅜	26	3,992,387	N.P.	Lago Oil & Transport.	....	May 2, 27	1,300	32	32½	31	32½	+ ½
19¾	9⅜	18	10⅜	(sh) 1,187,298	N.P.	Louisiana Oil Refining.	.....	.....	11,700	12	12	11½	11½	— ½
96	78	100	89	$4,000,000	$100	do pfd.	$1.62½	Aug. 15, 29	.....	.....	.....	.....	.....	.....
25½	12⅜	18½	12	(sh) 330,000	N.P.	Maracaibo Oil.	....	.....	1,300	14¾	14¾	14	14⅜	— ⅝
49¾	33	47⅞	33⅛	(sh) 2,316,897	N.P.	Marland Oil Co.	....	Mar. 31, 27	.....	.....	.....	.....	.....	.....
360	250	295	205	$45,942,800	$100	Mexican Petroleum.	$3Q	July 20, 29	.....	.....	.....	.....	.....	.....
....	....	....	....	12,000,000	100	do pfd.	$2Q	July 20, 29	.....	.....	.....	.....	.....	.....
73	4⅜	69¾	33½	(sh) 995,500	N.P.	Mexican Seaboard.	....	Nov. 15, 24	27,500	37	37½	34	35	— 2½
44½	25⅜	39⅞	30½	(sh) 1,857,461	N.P.	Mid-Continent.	50cQ	Aug. 15, 29	11,900	34¼	34½	32¾	33½	— 1
120½	103¼	121	120¼	$6,718,000	$100	do pfd.	$1.75Q	June 1, 29	.....	.....	.....	.....	.....	.....
7⅜	2⅜	5⅛	2⅛	23,849,720	10	Middle States.	....	July 1, 23	19,500	2½	2⅝	†2⅛	2⅛	— ½
5⅞	1½	3⅝	1⅝	5,950,500	10	do ctfs.	....	.....	4,100	2	2¼	†1⅝	1⅝	— ⅜
2¼	1	1½	1	(sh) 3,500,000	N.P.	Pacific Oil.	....	.....	9,200	1⅛	1⅛	1	1	0
55½	38¼	69	41⅛	$50,000,000	$50	Pan American P. & T.	....	Oct. 20, 27	5,700	66½	66½	64	65	— 2⅝
58⅞	37¾	69¼	40½	121,101,400	50	do B.	....	Oct. 20, 27	90,200	66⅛	67½	63	64¾	— 2½
28⅜	15½	17½	13¾	(sh) 400,000	N.P.	Pan American Western B.	....	Jan. 30, 27	450	14½	14½	13⅞	14⅜	— ⅛
21¾	11½	15¼	7⅜	(sh) 199,370	N.P.	Panhandle P. & R.	....	.....	500	9¼	9¼	9	9	— 1
106¼	70	76	47½	$2,935,200	$100	do pfd.	.....	July 2, 23	.....	.....	.....	.....	.....	.....
53⅞	35¼	47	35	(sh) 2,406,803	N.P.	Phillips Petroleum.	37½cQ	July 1, 29	20,000	38⅞	38⅞	36⅞	37¼	— ¾
5¼	½	3⅜	1½	$29,622,925	$25	Pierce Oil Corp.	....	.....	2,200	2⅛	2¼	2	2	0
50	16¼	51½	30	15,000,000	100	do pfd.	....	Feb. 1, 22	600	38	38	37	37⅛	— ⅞
6⅝	3½	5⅞	4	(sh) 2,500,000	N.P.	Pierce Petroleum.	....	.....	900	4½	4¾	4½	4½	— ⅜
64⅝	59½	65⅝	50	$60,636,450	$25	Prairie Oil & Gas.	....	Aug. 31, 27	5,900	57⅞	58	54¼	54¼	— 4⅛
.....	....	65	50	101,250,000	25	Prairie Pipe Line.	‡75cQ	June 30, 29	5,400	63¾	63¾	60	60	— 3¾
29⅞	16	25⅞	11½	37,450,850	50	Producers & Refiners.	....	Sept. 15, 23	900	14⅛	15¼	14⅛	15	0
49⅜	41	45¾	34	2,845,350	50	do pfd.	....	May 1, 25	40	37	38½	37	37	0
31¼	19	30⅜	23½	75,959,255	25	Pure Oil Co.	37½cQ	Sept. 1, 29	14,200	26½	26½	25½	26⅛	— ⅛
119	108	115½	111½	13,000,000	100	do 8% pfd.	$2Q	July 1, 29	200	113¼	113¼	111½	112¼	0
56	23½	49⅝	38⅜	47,127,725	25	Richfield Oil.	50cQ	Aug. 15, 29	8,900	42¼	42⅜	40⅝	41⅞	— 1
....	....	42½	26½	(sh) 1,200,000	N.P.	Rio Grande Oil Co.	‡$1S.A.	July 25, 29	9,100	28½	30	27¾	29	0
64	44⅝	55⅞	31¾	(sh) 546,646	$13.40	Royal Dutch N. Y. shares.	$1.873	Aug. 10, 29	19,900	56⅞	58⅝	55⅛	57¼	+ ⅜
57½	39⅜	55⅞	43	(sh) 65,203,000	£2	Shell Transport & T.	$1.447	July 23, 29	.....	.....	.....	.....	.....	.....
39⅜	23¼	31¾	25	12,254,979	N.P.	Shell Union Oil.	35cQ	July 1, 29	24,600	29⅛	29¼	26¾	28	— ⅝
27¼	18⅛	40⅛	18¼	$8,357,280	$10	Simms Petroleum.	40cQ	June 15, 29	16,900	36⅝	37⅜	34⅝	36½	— ¼
46¾	17⅜	45	31½	5,494,095	N.P.	Sinclair Consolidated.	‡50cQ	July 15, 29	10,400	37⅛	37⅛	35⅛	36⅜	— 1⅛
110	102½	111	107¾	$16,025,200	$100	do pfd.	$2Q	Aug. 15, 29	200	109	109	109	109	— ¼
42⅝	25	46½	32⅞	27,396,590	25	Skelly Oil Co.	50cQ	June 15, 29	29,100	42	45	39⅝	43⅞	— 1¾
80	53	81⅞	64	(sh) 13,016,435	N.P.	S. O. California.	62½cQ	June 15, 29	54,100	77¾	77⅞	74⅝	75⅞	— ⅝
59¾	37¾	73⅞	48	$612,095,850	$25	S. O. New Jersey.	‡25cQ	June 15, 29	219,400	71⅞	71⅞	67⅝	71⅜	0
45½	28¾	47	37⅜	434,094,575	25	S. O. New York.	40cQ	June 15, 29	154,100	44⅛	44⅜	40½	43⅜	— 1⅛
77	31½	75	57	(sh) 1,297,847	N.P.	Sun Oil.	25cQ	June 15, 29	1,900	74⅞	74⅞	72	73⅛	+ 2⅝
110	100	105½	100	$5,000,000	$100	do pfd.	$1.50Q	June 1, 29	20	102	102	102	102	+ ¾
14¼	2⅜	21½	6	(sh) 1,304,698	N.P.	Superior Oil Corp.	....	Dec. 20, 20	8,100	19½	19⅝	18¼	18¼	— 1¾
74¾	50	71¾	57¼	$211,082,925	$25	The Texas Corp.	75cQ	July 1, 29	34,100	70⅛	70½	66½	68⅝	— ¾
26⅝	12⅛	23⅞	15⅛	8,380,340	10	Texas Pacific Coal & Oil.	2½%	June 30, 29	5,900	17¼	17¼	16	16⅝	— ¾
41½	19⅝	38½	27⅛	(sh) 2,179,275	N.P.	Tide Water Oil Co.	20cQ	June 30, 29	500	34⅝	34⅝	34¼	34¼	— ¾
100⅛	86¾	97½	89¾	$20,321,000	$100	do 5½% pfd.	$1.25Q	Aug. 15, 29	1,600	90⅞	92	90⅞	92	+ ¾
25	14¾	23½	17½	(sh) 4,877,976	N.P.	Tide Water Associated.	....	Aug. 1, 27	34,800	20	20⅛	19	19⅜	— 1
91¾	81⅞	90⅞	84	$72,989,200	$100	do pfd.	$1.50Q	July 1, 29	1,500	88	89½	88	89	+ 1
14½	6¾	13	9	(sh) 3,842,029	N.P.	Transcontinental Oil.	....	.....	196,400	14¾	15	13	13⅜	— 1⅜
58	42¾	54½	45¾	$40,858,375	$25	Union Oil of California.	50cQ	Aug. 10, 29	16,000	54⅜	54⅜	51⅛	52	— 2
128⅛	110	157¾	121⅞	31,101,200	100	Union Tank Car Co.	$1.25Q	Sept. 3, 29	1,600	149	154¾	149	159¾	+ 5¾
44⅞	26	42⅞	28½	(sh) 488,359	N.P.	Warner Quinlan.	50cQ	July 2, 29	7,400	30¾	32	29½	31⅝	+ 1⅛
38	20⅛	40½	30¼	(sh) 490,000	N.P.	White Eagle Oil & Refining.	50cQ	July 20, 29	15,600	35	35	31	33½	— 1¼
22⅛	17¼	35	17	(sh) 428,967	N.P.	Wilcox Oil & Gas.	....	May 10, 28	5,200	17½	18¼	†17	18	— ½

*New High †New Low XEx-Dividends ‡Also Extras s-Stock Total Sales 1,332,420

Pittsburgh Curb Market

Transactions Week Ended Sept. 6, 1929

	Sales	High	Low	Last	Change
Ark. Gas "A".	3,725	24½	22¾	23½	0
Phoenix Oil.	11,000	.80	.75	.80	0

Pittsburgh Stock Exchange

Transactions Week Ended Sept. 6, 1929

	Sales	High	Low	Last	Change
Ark. Nat. Gas.	5,902	24½	22¾	23	—1
do pfd.	2,854	8½	8¾	8½	0
Devonian Oil.	3,375	15	13	14½	— ½
Dixie Gas & Util.	20	30	30	30	—1
do pfd.	100	74	74	74	—1
Lone Star Gas.	20,418	*51	48¾	50½	+1¾
Plymouth Oil.	1,585	25½	24	25	+1
Wiser Oil.	200	30	30	30	—1

*New high record.

The Footlift is a new type of lift truck designed by the Lewis-Shepard Co., Boston, for loads up to 3500 pounds. Elevation of the load is obtained by the operator stepping on a lever and letting his weight do the work.

America Cheaper to Find Than Oil

NEW YORK, Sept. 6.—$5,000 to discover America and between $50,000 and $100,000 to discover oil by drilling one well! That fact is brought out by the American Petroleum Institute through its public relations department.

Columbus, on the voyage which resulted in the discovery of America, expended about $5,500, according to documents recently unearthed in Genoa, Italy. Now it costs from $50,000 upward to find oil by drilling one well. Forty years ago virtually all oil wells were shallow, few going to a depth exceeding 2000 feet and most not exceeding 1000 feet. The cost per well was less than $1000. Twenty years ago oil was struck at an estimated average depth of 1500 feet, and had an estimated average cost per well of $2500.

Cleveland Stock Market

Sept. 6	Par Value	Bid	Asked
Canfield Oil Co.	$100	...	149
do pfd.	100	104	...
Fred G. Clark.	10	10¼	12
National Refining.	25	40	42¾
do pfd.	100	...	135
Paragon Refining.	25	15	17⅞
do pfd.	N.P.	51⅛	...
do ctfs.	..	..	23

CHICAGO, Sept. 6.—Solon S. Jackman, president and founder of the Chicago Independent Oil Co., 12057 Emerald Avenue, Chicago, was recently elected vice-president of the West Pullman park district commission. His term of office is for six years. Mr. Jackman is also chairman of the board's permanent committee of finances.

FACTS

SERIES No. 3

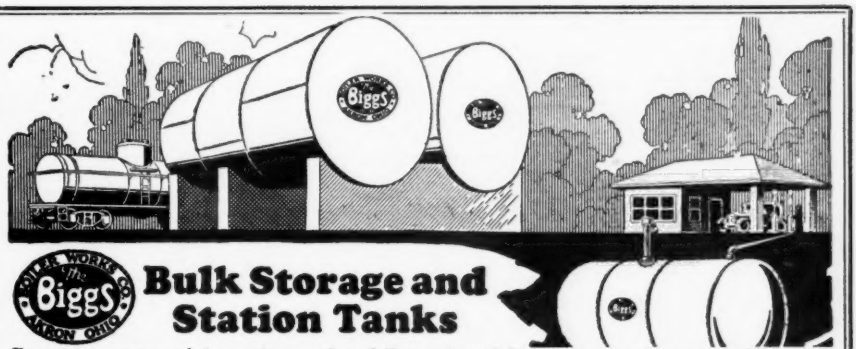
A 15 to 20° below zero cold test motor oil has actually been accomplished *without losing the viscosity of* 57 @ 210° F. You need that high viscosity @ 210° to stand the dilution of gasoline in the crank case which will average 12½% in 150 miles traveling.

As a comparison, take any pure Pennsylvania Motor Oil with a viscosity of 57 @ 210, de-wax it to stand a cold test of 15 to 20° below zero and you will admit that this is *some* winter motor oil. That's what you get with the new GREEN GOLD SUB-ZERO MOTOR OIL.

We have an interesting exclusive proposition for jobbers which we would be glad to send you.

THE WARREN REFINING & CHEMICAL CO.
Cleveland, Ohio

For twenty-five years a leader in lubricating specialties



Bulk Storage and Station Tanks

Forty years successful experience; plant fully equipped for fabricating plate up to 1½" thick.
Pressure Stills for Cracking Process - Fractionating Towers - Dephlegmating Towers, Bubble Towers - Heat Exchangers - Agitators - Steam Stills - Crude Stills - Condenser Boxes, Run Down Tanks - Blending Tanks - Hemispherical Tanks - Blow Cases - Acid Tanks, Compounding Kettles - Storage Tanks to 80,000 Barrels - Smoke Stacks and Breechings, etc.

THE BIGGS BOILER WORKS COMPANY, Buchtel and Bank Streets, AKRON, OHIO
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"MERCHANDISING OF PETROLEUM PRODUCTS" goes into methods of studying the possibilities of your territory and making your own canvass of farm machinery on individual farms. How the agent and salesman can coordinate their efforts to develop new business and give the kind of service that holds accounts. How the market for other products than gasoline and motor oil can be worked up in a territory. Selling through service stations. Handling of complaints and other marketing problems.

The author, R. H. Thomas, has had many years of actual experience in the merchandising of petroleum products. His book gives you the benefit of his own experience as a successful marketer of petroleum products.

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..... *Cut and Mail* .....

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Penton Bldg., Cleveland, Ohio

Send me THE MERCHANDISING OF PETROLEUM PRODUCTS by R. H. Thomas. Enclosed is $2.50.

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Standard Oil Stocks on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Sept. 7 Sales	First	High	Low	Last	Change
22 3/8	14 7/8	18 3/4	14 1/4	£4,126,460	£ 1	Anglo-American Oil	36c	June 5, 29						
21 1/4	15	18	13 1/4	.....	....	do certificates	36c	June 5, 29	100	15	15	15	15	0
20 1/2	14 3/8	17	12 3/4	.....	£ 1	do cts. non-voting	36c	June 5, 29	100	13 1/4	13 1/4	13	13	— 1/4
5	1 1/4	2 3/8	1 1/8	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	300	1 1/4	1 1/2	1 1/4	1 1/4	— 1/4
9 3/4	3 1/4	4 1/8	1 1/2	$10,000,000	$50	do pfd	.....	.....	600	1 7/8	1 7/8	1 3/4	1 7/8	— 1/8
56	44 1/2	46 1/2	26	$1,000,000	25	Borne-Scrymser	‡$1S.A.	Apr. 15, 29						
76	58	74 1/4	58 3/8	10,000,000	50	Buckeye Pipe Line	‡$1Q	June 15, 29	200	67 1/8	68	67 1/8	68	0
161	117 1/4	210	140 1/8	3,000,000	25	Chesebrough Mfg	‡$1Q	June 30, 29	100	200	200	200	200	— 5 3/4
23	16	29	16 7/8	36,123,350	10	Continental Oil	.....	Dec. 15, 27	2,800	20 1/4	20 1/2	19 1/4	19 3/4	— 1 1/2
17 1/2	9 1/2	11 3/8	7 3/8	.....	N.P.	Creole Petroleum	.....	.....	18,500	9 1/8	9 3/8	8 3/4	8 7/8	— 3/8
82	67	95	62	1,500,000	50	Cumberland Pipe Line	$1Q	June 15, 29	.....	....	....	....	....	.....
88	64 3/8	70 1/2	55 1/2	5,000,000	100	Eureka Pipe Line	$1Q	Aug. 15, 29	.....	....	....	....	....	.....
13	4 1/4	6 5/8	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	.....	....	....	....	....	.....
86	26	90	73 1/4	4,000,000	100	do new pfd	.....	June 30 26	.....	....	....	....	....	.....
89 3/4	35	88	73 1/2	2,000,000	100	do old pfd	.....	June 30, 26	.....	....	....	....	....	.....
114 3/4	59 1/4	126 7/8	89 5/8	73,685,700	25	Humble Oil & Refining	‡30cQ	July 1, 29	9,400	122 7/8	124 1/2	119 3/8	121 7/8	— 1 1/2
290 1/2	176 1/2	340 1/2	285	20,000,000	100	Illinois Pipe Line	$10S.A.	June 15, 29	350	303 1/4	307	303 1/4	307	+ 2 1/2
104	56 3/4	119 5/8	88	(sh) 6,605,442	N.P.	Imperial of Canada	12 1/2cQ	Sept. 2, 29	.....	....	....	....	....	.....
...	...	...	...	.....	....	do new	.....	.....	13,400	38 5/8	41	38	39	+ 1
91 7/8	74 5/8	106 1/2	81 1/4	$5,000,000	$50	Indiana Pipe Line	‡$1Q	Aug. 15, 29	.....	....	....	....	....	.....
...	...	...	...	.....	....	do new	.....	.....	2,100	28 3/4	28 3/4	28 1/2	28 1/2	— 1 1/4
55	35	65 1/2	46 1/8	(sh) 7,123,544	N.P.	International Petroleum	12 1/2c	June 25, 29	.....	....	....	....	....	.....
....	....	....	....	.....	....	do new	.....	.....	13,900	28 7/8	29 1/4	26 1/2	27 7/8	— 1 1/8
32 3/8	19 3/8	25 7/8	21 3/8	$6,363,350	12.50	National Transit Co	25cQ	June 15, 29	900	22	22	21 3/8	22	+ 1/2
75	38 1/2	85	72	5,000,000	100	New York Transit	....	July 15, 26	.....	....	....	....	....	.....
....	....	....	....	.....	....	do new	.....	.....	.....	....	....	....	....	.....
69	56 1/2	63	52	2,000,000	50	Northern Pipe Line	$2S.A.	July 1, 29	.....	....	....	....	....	.....
83 1/2	58 1/2	79 7/8	64 1/4	60,000,000	25	Ohio Oil Co	50cQ	June 15, 29	300	75 1/8	76 1/2	74 1/2	76 1/2	+ 1 1/8
84	28	44 1/2	23 1/8	10,000,000	25	Penn Mex. Fuel	75c	Dec. 16, 28	.....	....	....	....	....	.....
220	167	50	36 1/2	4,000,000	25	Solar Refining	$1.25S.A.	June 20, 29	.....	....	....	....	....	.....
19	12	22 1/2	13	1,000,000	10	Southern Pipe Line	$1	Mar. 1, 29	.....	....	....	....	....	.....
71 7/8	36 3/4	60 1/4	40 3/8	30,000,000	25	South Penn Oil	50cQ	June 30, 29	1,800	49 7/8	49 7/8	47 1/2	48	— 2
102	70	70	62 3/4	1,750,000	50	South West Pa. Pipe Lines	$1	July 1, 29	.....	....	....	....	....	.....
95 7/8	70 7/8	103 1/4	51 1/2	348,175,069	25	S. O. Indiana	62 1/2cQ	June 15, 29	65,500	58 7/8	58 7/8	54 1/4	56 1/4	— 1 1/2
27 3/4	15	26	18	8,000,000	25	S. O. Kansas	.....	June 16, 24	2,100	24 5/8	24 5/8	23 1/4	23 7/8	+ 1/4
49	44	45 1/4	35 1/4	25,654,516	10	S. O. Kentucky new	40cQ	June 30, 29	5,800	37 1/2	37 3/4	36 5/8	37	— 1/4
54 5/8	39 7/8	50 1/4	45 1/2	4,649,225	25	S. O. Nebraska	‡62 1/2cQ	June 20, 29	.....	....	....	....	....	.....
134	71	129	110 1/4	14,000,000	25	S. O. Ohio	62 1/2cQ	July 1, 29	300	118 1/2	118 1/2	116 1/4	116 1/4	— 3 3/4
125	116	124 1/2	113 1/2	7,000,000	100	do pfd	$1.75Q	Sept. 3, 29	460	115	117 1/2	114 3/4	115	— 3/4
23 1/2	16	18	14	861,466	25	Swan Finch	30c	Jan. 15, 29	.....	....	....	....	....	.....
111	72	133 3/4	105 1/2	126,154,000	25	Vacuum Oil	$1Q	June 20, 29	4,800	125 1/8	126 3/4	120 7/8	121 1/8	— 4 7/8

*New High †New Low ‡Also Extras

Independent Oils on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Par Value	Stocks	Transactions Week Ended Sept. 7 Sales	First	High	Low	Last	Change
1 1/2	.53	.72	.25	$5	*Amer. Cons. Oilfields	2,800	1/16	1/16	1/4	1/4	0
9 1/2	3 1/8	8 5/8	3 1/2	N.P.	Amer. Maracaibo	3,800	3 3/4	3 3/4	3 1/2	3 1/2	— 3/8
4 1/2	2 1/4	5	1 7/8	$10	Argo Oil	400	2 1/4	2 1/4	2 1/4	2 1/4	+ 1/4
3 3/4	3 3/8	24 1/2	3 3/4	N.P.	Arkansas Nat. Gas	43,800	24 3/8	24 1/2	22 3/8	24 1/2	+ 1/2
....	....	24 1/2	6 3/4	N.P.	do A	68100	24	24 1/2	22 1/4	24 1/2	+ 1/2
....	....	9	7 7/8	10	do pfd	600	8 1/2	8 7/8	8 1/2	8 5/8	+ 1/8
55	32 3/4	70	50	N.P.	British American Oil	400	66	*70	66	70	+ 4
23 7/8	3 3/4	4 7/8	2 5/8	25c	Carib Syndicate	2,800	2 7/8	2 7/8	2 5/8	2 3/4	— 1/4
....	....	53 1/2	27 3/4	N.P.	Cities Service new	124,300	51 7/8	*53 1/2	51 7/8	53 3/8	+ 1 3/8
103 1/2	94 1/2	98 1/2	88 3/8	100	do pfd	2,000	94 1/2	94 7/8	94 1/8	94 3/4	— 1/8
9 5/8	8 7/8	9 1/4	8 7/8	10	do pref. B	400	9	9	9	9	0
97	88 1/2	96	90	100	do pref. BB	100	91	91	91	91	+ 1
2 1/4	1	1 1/2	5/8	1	Colombia Syndicate	300	7/8	7/8	7/8	7/8	0
17 3/4	9 3/4	15	6	N.P.	Colon Oil	2,100	8 3/4	9 1/8	8 3/4	8 3/4	— 1/4
8 7/8	6 1/4	11 1/8	4 7/8	10	Consolidated Royal	100	5 7/8	5 7/8	5 5/8	5 5/8	0
....	....	100	45	N.P.	Cosden Oil Co	2,800	98	98	92 1/4	94 7/8	— 3 1/4
....	....	82	71	....	do pfd	400	76	78	76	78	— 3
3 1/4	.76	2 1/4	1 1/8	N.P.	Crown Central	2,100	1 1/2	1 5/8	1 3/8	1 1/2	+ 1/8
15	6 3/4	11 3/4	8	N.P.	Crystal Oil	.....	....	....	....	....	.....
50	48	51 1/8	51 1/8	$100	do pfd	.....	....	....	....	....	.....
33 1/2	8 1/8	26	12	N.P.	Darby Petroleum	1,100	12 3/4	13	12 1/4	13	+ 3/4
2 7/8	1	10 7/8	2	N.P.	Derby Oil & Refining	2,400	7 1/8	7 3/8	6 7/8	7	— 1/8
21 1/8	7 1/2	44	20 7/8	N.P.	do pfd	.....	....	....	....	....	.....
165	101 1/8	209	142 1/8	$25	Gulf Oil Corp	12,800	205	205	195 1/8	201 7/8	— 3 3/8
7 1/2	5 5/8	7 1/2	3 5/8	5	Homaokla Oil	400	4	4	4	4	+ 1/8
3 3/8	1	2 7/8	1 1/8	10	Intercontinental Pet	3,800	1 1/8	1 1/4	1 1/8	1 1/8	— 1/8
3	1/4	3 5/8	1 1/2	N.P.	Kirby Petroleum	1,400	2	2	2	2	— 1/8
9 3/4	5 1/8	6 1/8	2 7/8	N.P.	Leonard Oil & Dev	3,800	4	4	3 3/4	3 7/8	— 1/8
43 3/8	20	38 7/8	24 3/4	N.P.	Lion Oil & Refg	2,800	32 1/8	32 1/8	31 5/8	31 5/8	— 2 1/8
69 1/8	48 1/4	87	67	$25	Lone Star Gas	.....	....	....	....	....	.....
....	....	51 3/4	32 1/4	....	do new	7,800	48 3/4	*51 3/4	48 1/4	51 1/2	+ 3 1/4
1 7/8	.50	1 1/4	3/8	1	Magdalena Syndicate	2,400	1/2	9/16	1/2	9/16	+ 1/16
48 1/2	32	38 1/2	20	N.P.	Margay Oil	700	20	20	†20	20	— 1/4
8	2 3/4	6 3/8	2 7/8	N.P.	Mexico-Ohio Oil	300	2 7/8	2 7/8	†2 7/8	2 7/8	0
....	....	42	15 7/8	N.P.	Missouri-Kan. P. L	5,900	30 1/2	30 1/2	27 3/4	28 7/8	— 1 1/4
1 3/4	.76	1 1/2	3/8	1	Mountain & Gulf	1,700	1	1	7/8	7/8	0
28 3/8	19 1/2	22 7/8	11 1/8	10	Mountain Producers	2,800	13	13	12 1/2	12 3/4	— 1/2
....	....	43 7/8	24 3/4	N.P.	Nat. Fuel Gas (new)	800	37 1/8	39	36 1/2	37 7/8	+ 3/4
5 5/8	4 1/4	5	3	5	New Bradford	200	3 3/8	3 1/2	3 1/8	3 1/8	— 3/8
5 1/2	3	4 3/4	3	10	New England Fuel	100	4 3/4	*4 3/4	4 3/4	4 3/4	0
11 7/8	7 1/8	9 3/8	5 1/2	1	New Mex. & Ariz	300	5 7/8	5 7/8	5 7/8	5 7/8	0
15 1/2	11 1/2	24 1/2	16	25	New York Petrol	200	18 1/8	18 1/2	18 1/8	18 1/2	+ 1/2
13 1/4	8 1/8	18 1/2	8 3/4	N.P.	North Cent. Texas	800	14 1/8	14 1/8	12 7/8	12 7/8	— 1 1/8
....	....	19 1/4	12 1/2	N.P.	Oil Stock, Ltd. A	400	15	15	14 3/8	14 1/4	— 3/4
....	....	18 1/4	14 1/8	N.P.	do B	.....	....	....	....	....	.....
26 1/4	20	23 1/4	14 1/2	N.P.	Pacific Western Oil	3,000	15 3/4	21 3/4	15 3/4	19 1/2	+ 3 5/8
6	2 1/4	3 1/2	1	N.P.	Pandem	800	1	1 1/8	1	1 1/8	— 1/8
15 5/8	8 1/2	10 1/4	5 1/2	N.P.	Pantapec	2,800	5 7/8	6	5 1/2	5 3/4	0
20	10 5/8	25 1/2	22 1/2	$25	Paragon Refg. B. ctfs.	.....	....	....	....	....	.....
7 3/4	4 7/8	7 3/8	4 3/8	$10	Pennok Oil	.....	....	....	....	....	.....
....	....	34 1/2	25 1/2	N.P.	Petroleum Corp	19,500	27 1/4	27 1/4	25 3/4	26 1/8	— 7/8
5 3/8	3 1/8	....	....	$5	Pittsburgh Oil & Gas	.....	....	....	....	....	.....
31 3/8	26 1/2	30	22	N.P.	Plymouth Oil	2,300	24 1/8	25	24 1/8	24 7/8	+ 1 7/8
18	8	16	10	25	Red Bank Oil	600	10	10	10	10	0
13	4 1/8	8 1/2	4 1/2	N.P.	Reiter-Foster	400	4 7/8	5	4 5/8	4 5/8	— 3/8
31 1/2	23 1/4	25 1/2	23 7/8	$25	Richfield pfd	100	24	24	24	24	0
....	....	29	23	....	Root Refining pfd	200	25	25 1/4	24	24	— 1/4
12	4 5/8	11	5	N.P.	Ryan Consolidated	1,700	5 1/2	5 7/8	5	5 7/8	+ 7/8
7 1/4	5 1/2	5 7/8	2	$10	Salt Creek Cons	100	2 5/8	2 5/8	2 5/8	2 5/8	+ 1/8
35	23 1/4	25 7/8	13	10	Salt Creek Prod	600	15	15	14 1/2	14 5/8	— 3/4
3 1/2	1	2 1/2	1/2	5	Savoy Oil	.....	....	....	....	....	.....
40	27	33 1/8	32	25	Shreveport El Dorado	.....	....	....	....	....	.....
....	....	24	14 1/2	N.P.	Southland Royalty	1,100	15	15	14 1/2	14 7/8	— 1/8
....	....	23	12 5/8	N.P.	Texon Oil & Land new	800	13 1/2	13 1/2	13	13	— 1/2
22 7/8	13	16 7/8	11 5/8	$10	Tidal Osage	.....	....	....	....	....	.....
21 1/4	13 1/8	16 1/2	10 1/8	10	do not-voting	.....	....	....	....	....	.....
93 3/4	75	155	80	100	Transcontinental pfd	.....	....	....	....	....	.....
74 1/4	18	81 1/8	66	10	Venezuela-Mexico	300	79 1/2	79 1/2	79	79 1/2	— 1 5/8
9 1/8	4 3/4	6 1/2	3	5	Venezuelan Petrol	1,500	3 3/4	3 3/4	3 1/2	3 3/4	— 1/8
8 1/4	4 7/8	9 1/8	4 1/8	1	Woodley Petroleum	700	4 1/4	4 1/4	4 1/4	4 1/4	0
3/8	1/8	5 3/8	1	25	Y Oil & Gas	300	1 1/2	1 1/2	1 1/4	1 1/4	0

*New High †New Low

New York Curb Bonds

Week Ending Sept. 6, 1929

	High	Low	Last	Change
Beacon Oil 6s '36	120	120	120	—2
Cities Serv. 5s '66	84	83	83	—3 3/4
Cities Serv. G 5 1/2s '42	87 1/4	86 7/8	87 1/4	+ 3/8
Cities Serv. G. P. 6s '43	93 1/2	92 3/4	92 3/4	— 1/4
Cont. Oil 5 1/4s '37	92 1/2	92 1/4	92 1/4	— 1/4
Empire O & R 5 1/2s '42	88	87	87 1/4	0
Gulf Oil 5s '37	99	97 3/4	98	0
Gulf Oil 5s '47	99 3/4	99	99	— 1/2
Indep. Oil 6s '39	109 5/8	107 1/8	108 5/8	— 3/8
Sun Oil 5 1/2s '39	100	100	100	0

Oil Dividends

	Amount	Payable	Stock of Record
Borne Scrymser S. A.	$1	Oct. 15	Sept. 27
Humble Oil q	30c	Oct. 1	Sept. 11
do extra	20c	Oct. 1	Sept. 11
Lone Star Gas q	20c	Sept. 30	Sept. 19
Richfield Oil pfd. q	43 3/4c	Nov. 1	Oct. 5
Salt Creek Cons. q	10c	Oct. 1	Sept. 14
Tide Water Oil q	20c	Sept. 30	Sept. 16
Tide Water Assoc. pfd. q	$1.50	Oct. 1	Sept. 16

New York Bonds

Week Ending Sept. 6, 1929

	High	Low	Last	Change
Assoc. Oil gold 6s	102 1/2	102 1/4	102 1/2	0
Atlantic Refg. deb. 5s	100 1/4	100	100 1/4	+ 1/4
Cal. Pet. 5s	96 3/8	95 1/4	96 1/2	— 3/8
Cal. Pet. 5 1/2s	100	98 3/4	100	+ 1/4
General Asphalt 6s	104 5/8	104 1/2	104 5/8	+ 1/8
General Pet. 5s	100 1/4	100 3/8	100 1/4	0
Humble Oil & Refg. 5s	99 3/4	99 1/2	99 3/4	+ 1/8
Humble Oil & Refg. 5 1/2s	100 5/8	100 1/4	100 5/8	+ 1/8
Pan Amer. P & T 7s	104 3/4	104 3/4	104 3/4	+ 1/4
Pan Amer. P & T 6s	110 1/4	109 1/2	110	+ 1/4
Pan Amer P & T 6s	95	93 3/8	94	+ 1/2
Phillips Pet. 5 1/4s	90	88 1/2	89 1/4	— 3/8
Pure Oil 5 1/2s	98 1/4	97 1/2	97 7/8	0
Richfield Oil	102	101 1/2	101 3/4	— 3/4
Shell Union Oil 5s	96	95 1/8	95 1/8	— 5/8
Sinclair Con. Oil 7s	102	101 1/8	101 3/8	+ 1/8
Sinclair Con. Oil 6 1/2s	99 1/2	98 3/4	99 1/4	+ 1/4
Sinclair Con. Oil 6s D	98 1/4	98	98 3/8	+ 1/8
SinclairCon.OilCrude 5 1/2s	95 1/2	94 3/4	95	— 1/4
Sinclair Pipeline	93	92 1/2	92 5/8	+ 1/8
Skelly Oil 5 1/2s	89 3/4	89 1/4	89 3/4	— 1/4
S. O. N. Y. 4 1/2s	93 1/2	92 1/2	93	— 1/2
S. O. N. J. 5s	101 1/4	100 3/4	101	— 1/4
Trans.-Cont. Oil 6 1/2s	104 3/8	101 3/8	102 1/2	—2
Union Oil of Calif. 6s A	105 1/2	105 3/8	105 1/2	+ 1/8
Union Oil of Calif. 5s C	97	96 1/2	97	+ 3/8
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Miss Agnes M. Simpson

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Her first man-sized job was the conversion of 6,000,000 shares of Imperial Oil stock to a four-for-one basis, which happened back in 1915. When this tremendous task presented itself, Miss Simpson was chosen as the "man" of the hour. Since that year, she has issued certificates for two co-operative investment trusts through which more than 5000 employes have become shareholders in the company.

Twice the capital stock of the company has been converted on a four-for-one basis, and the increasing number of shareholders makes the issuing of new certificates a formidable task. Dividends on the stock are declared four times a year, all of which comes from the assistant secretary's office.

Miss Simpson joined the Imperial organization at Sarnia, Ont., in February, 1914. She soon became assistant to J. H. Archbold, secretary. In 1919 the secretary's office was moved to Toronto and when Mr. Archbold retired in 1922, E. V. A. Kennedy, formerly assistant to the treasurer, succeeded him as secretary. Mr. Kennedy died in March, 1926, at which time Miss Simpson became assistant secretary, in charge of the Toronto office, which position she holds today.

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Thoroughly trained and experienced. Familiar with all phases of wholesale and retail distribution of refined petroleum products thru tank car, bulk and service stations.

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